



ANALES

DEL

MUSEO NACIONAL DE MONTEVIDEO

PUBLICADOS BAJO LA DIRECCIÓN

DEL PROFESOR

J. ARECHAVALETA

DIRECTOR DEL MUSEO NACIONAL DE MONTEVIDEO,
PROFESOR DE HISTORIA NATURAL MÉDICA
DE LA FACULTAD DE MEDICINA DE MONTEVIDEO,
MIEMBRO CORRESPONDIENTE DE LA SOCIEDAD CIENTÍFICA ARGENTINA,
DE LA ACADEMIA INTERNACIONAL DE GEOGRAFÍA BOTÁNICA (LE MANS),
DE LA SOCIEDAD DE CIENCIAS NATURALES Y MATEMÁTICAS DE CHERBURGO,
ETC., ETC., ETC.

TOMO IV

ENTREGA XIX

STIPEAE PLATENSES

AUCTORE

CAROLO SPEGAZZINI

MONTEVIDEO.

ESTABLECIMIENTO TIPO-LITOGRAFICO «ORIENTAL»

Calle de los Treinta y Tres núm. 106

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LECTORI BENEVOLO SALUTEM

Stipeae magni sunt momenti in vegetatione herbacea non solum Pamparum planitiei sed etiam pratorum montium totius Ditionis Platensis et pecudibus pabulum, non spernendum, praebent; plurimarum specierum tamen flosculi maturi, ab incolis «*flechillas*» vocati, ovibus agnibusque praecipue perquam obnoxii, ob anthopodia pungentissima retrorse hispidula, quae in cutem penetrantia, tumores, dum numerosos non raro mortales, efficiunt.

Hae graininaceae in America australi adhuc valde neglectae, earum synonymia summo opere intricata et confusa earumque descriptiones, sine norma, quandoque perbreves atque inutiles, quandoque nimis fusae sed inanes.

Hoc opellum, etsi nonnihil saepe deficiens, in spicularum *plena maturitatis* characteribus firmum, stipearum determinatione certe explanaturum atque cultoribus *Scientiae amabilis* humane acceptum futurum in spe sum.

Praeclaris viris Doctori *F. Kurtz*, Professori *J. Arechavaleta* nec non Pharmacopolae *T. Stuckert*, me valide adjuvantibus, aequum nunc est palam gratias agere.

Priusquam exordium hoc brevissimum absolvam, animadvertiones, studiosis amicis, sequentes commonebo:

- I. In mensuris culmorum altitudinis panicula comprehenditur.
- II. In mensuris glumarum longitudinis, mucrones v. aristulae, ubi adessent, intelliguntur.
- III. In synonymorum enumerationibus signum hoc «!» pospositum, me specimina autentica vidissem, indicare.
- IV. In nominum genericorum specierum commutationibus, sigla

auctoris pristini, parentesibus inclusa, inter nomen specificum et sigla auctoris emendatoris, more fere universali, situantur, e. gr.: **Jarava ichu** R. & Pav.=**Stipa ichu** (R. & Pav.) Kunth.

In nominum specificorum commutationibus, e contra, sigla auctoris pristini, parentesibus inclusa, post sigla emendatoris collocatur, e. gr.: **Stipa macrathera** Ph.=**Stipa Rudolphi** Speg. (Ph.).

Ex La Plata, Calendis Septembris, 1900.

Carolus Spegazzini

CLAVIS DICHOTOMICA

GENERUM

GRAMINACEARUM STIPACEARUM

1. *Glumella infera*. {
 - tenuis, membranacea..... 2
 - indurata rigida coriacea 4

2. *Rachilla ultra flo-* {
 - producta..... BRACHYELYTRUM Beauv.
 - rem in setam... {
 - non producta 3

3. *Glumae*..... {
 - et glumellae aristatae PERIELEMA Presl.
 - muticae; glumella infera tantum \pm°
 - longe aristata..... MUEHLENBERGIA Schreb.

4. *Plantae*..... {
 - dioicae..... ACIACHNE Benth.
 - hermafroditae v. polygamae..... 5

5. *Glumella infera*.. {
 - mutica, supera etiam rigida coria-
cea..... MILIUM Linn.
 - aristata, supera tenuis v. \pm° rigi-
dula v. coriacea 6

6. *Arista glumellae*.. {
 - trifida..... ARISTIDA Linn.
 - integra..... 7

7. *Glumella supera*. {
 - coriacea, longitrorsum 2-nervoso-
carinata, inter carinas sulcata... **Oryzopsis** Michx.
 - plana, non sulcata nec carinata, non
v. obsolete nervosa **Stipa** Linn.

ORYZOPSIS Michx (*)

Char. Spiculae uniflorae; flosculus anthopodio (*stipite* v. *callo* auct.) brevi v. elongato, umboniformi-truncato v. obconico-acuto, glabro v. pubescente suffultus; glumae 2, membranaceae parum inaequales, flosculo +ve breviores v. longiores; glumella infera, v. exterior tenuis v. crassa +ve coriacea, saltem ad maturitatem pubescens, villosa v. glabra, laevis striata v. papillosa, apice attenuata v. contracta saepeque +ve calloso-coronata, arista persistente v. decidua, ipsa brevior v. longior armata, *marginibus adnexo-subvalvatis*, nec imbricatis; glumella supera v. interna inferam subaequans coriacea, *medio longitrorsum 2-nervoso-carinata, inter carinas +ve profunde sulcata*; lodiculae 2 v. 3; stamina 3; styli breves v. longiusculi distincti, stigmatibus plumosis; caryopsis glumellis +ve induratis arcte involuta, libera.

CLAVIS DICHOTOMICA SUBGENERUM

- | | | | |
|----------------------------|---|---|--------------------------|
| | { | +ve elongatum, tereti-obconicum
villosum apiceque acutum..... | I. PIPTOCHAETIUM (Prsl.) |
| 1. <i>Anthopodium</i> | { | semper breve, turbinato-annuliforme
apiceque truncatum, +ve umbi-
licatum | 2 |
| 2. <i>Anthopodium</i> | { | glaberrimum..... | II. PIPTATHERUM (Beauv.) |
| | { | +ve pubescens v. villosum..... | III. URACHNE (Trin.) |

(*) Characteres differentiales generum *Oryzopsis* et *Stipa* a Cl. Hackel in Engler, Pflanz-famil. dati omnino vitiosi et ludibundi mihi videntur, dum glumellae superae fabrica eximie et semper stabilis et facilius inspicienda.

STIPA LINN.

Char. Spiculae uniflorae; flosculus anthopodio (*stipite* v. *callo* auct.) brevi v. elongato, semper e terete obconico apice acuto, rarius obtuso, glabro v. pubescente suffultus; glumae 2, membranaceae parum inaequales, flosculo \pm ve breviores v. longiores; glumella infera v. exterior tenuis v. crassa, \pm ve coriacea, saltem ad maturitatem, pubescens, villosa v. glabra, laevis striata v. papillata, apice attenuata v. contracta, saepeque \pm ve callose v. membranose coronata, arista persistente v. decidua, ipsa brevior v. longior armata, *marginibus superpositis (imbricatis)*, *altero externo alterum internum obtegente, nec* adnexo-subvalvatis; glumella supera v. interna quam infera *aequilonga v. brevior, saepeque brevissima subimperspicua, plana non c. obsolete nervosa, nunquam* carinata nec sulcata; lodiculae 2 v. 3; stamina 3; styli breves v. longiusculi distincti, stigmatibus plumosis; caryopsis glumella infera \pm ve indurata arcte involuta, libera.

CLAVIS DICHOTOMICA SUBGENERUM

- | | | | |
|------------------------|---|---|------------------------|
| 1. <i>Arista</i> | { | brevior..... | I. ANATHEROSTIPA Hack. |
| <i>sua</i> | | longior (saepius pluries)..... | 2 |
| 2. <i>Arista</i> | { | tota v. pro parte longe villosa..... | 3 |
| | | tota nuda scabra v. pubescens..... | 4 |
| 3. <i>Arista</i> | { | per tota longitudine villosa v. | |
| | | plumosa..... | II. PTILOSTIPA Speg. |
| | | in parte infera tantum, subgeniculis,
longe villosa..... | III. PAPPOSTIPA Speg. |

	/ elongatum, pluries (saepius) diametrum flosculi superans; corona eximie evoluta et a glumella distincta	IV. STEPHANOSTIPA Speg.	
4. <i>Anthopodium</i> ...	/ breve, diametrum flosculi (saepius) non aequans v. vix superans; corona nulla v. obsoleta et cum glumella subcontinua		5
5. <i>Glumella infera</i> ..	/ \pm ve pubescens, pilosa v. villosa		6
	/ glaberrima, laevis v. scabra		7
6. <i>Glumella infera</i> ..	/ superne longe papposeque villosa, inferne pubescens v. glabra.	V. JARAVA (R. & Pav.)	
	/ tota brevis v. brevissime pubescens, v. superne saepe glabrata.	VI. DASYSTIPA Speg.	
7. <i>Glumella supera</i> ..	/ majuscula inferam subaequans.	VII. PARASTIPA Speg.	
	/ pusilla, saltem quam infera dimidio brevior.		8
8. <i>Flosculi</i>	/ cylindracci, fusoides, subclavulati v. \pm ve e latere compressuli, clavati v. subconoides-elongati; arista centralis	VIII. MICROSTIPA Speg.	
	/ obovati, dorso \pm ve gibbosi; arista \pm ve excentrica	IX. NASSELLA Trin.	

CLAVIS DICHOTOMICA

SPECIERUM

ORYZOPSISIDIS MICHX.

1. *Anthopodium*..... } \pm^{ve} elongatum, tereti-oboeonicum vil-
losum apiceque acutum 2
} semper breve, turbinato - annuliforme
apiceque truncatum, \pm^{ve} umbili-
catum..... 8
2. *Flosculi*..... } villo longiore fulvescente toti vestiti. 1. *O. LASIANTHA* (Gr.) Speg.
} toti glabri, laeves v. papillosi 3
3. *Anthopodium* } brevissimum, vix tertium mm long.
} attingens, longiuscule rufo - villo-
sum; corona subcupulata saepe pa-
pillis nonnullis e latere dorsali cincta 2. *O. GRISEBACHII* Speg.
} elongatum, ultra 1 mm long..... 4
4. *Anthopodium flo-* } brevius v. vix aequans; flosculi ex obo-
sculi diametrum } vato obpyriformes, dorso non v. vix
} subearinati, $\frac{2}{3}$ superne late rotundati,
} \pm^{ve} papillati; corona parva cu-
puliformis ciliolato-fimbriata..... 3. *O. BICOLOR* (Vahl) Speg.
} duplo saltem aequans..... 5
5. *Glumae flosculis* } ultra 22 mm long.; flosculi maturi e
valde longiores } plumbeo-violacei aterriminon niten-
} tes; anthopodium vix dimidiam flo-
} sculi longitudinem superans..... 4. *O. HACKELI* (Arech.)
} Speg.
} 20 mm long. semper breviores; flosculi
} maturi \pm^{ve} castanei..... 6

6. *Anthopodium flo-* \ dimidium non v. vix aequans..... 6. *O. NAPOSTAENSIS* Speg.
scut. longitudi- \ var. *brachysperma*
nem...... \ Speg.
 totam fere aequans..... 7
7. *Aristae geniculum* \ supra medium situm et parte recta su-
superum..... \ prema aristae, reliquam inferam;
 flosculo excluso, non aequans; folia
 planiuscula 5. *O. RUPRECHTIANA* (Dsv.)
 Speg.
 infra medium situm et parte recta su-
 prema aristae, reliquam inferam,
 flosculo addito, superans; folia ca-
 pillaria v. setacea 6. *O. NAPOSTAENSIS* Speg.
 var. *typica* Speg.
8. *Anthopodium bre-* \ glaberrimum; glumella coriacea atra
ve..... \ striata; corona applanato-pulvini-
 formis cinereo-pubescent. 7. *O. LEORODA* Speg.
 + pubescens v. villosum; villus rufe-
 scens v. pallescens 9
9. *Corona*..... \ magna depresso-pulviniformis, cinereo-
 pruinosula 10
 parvula umboniformis v. turbinato-
 subcupuliformis 11
10. *Floscuti*..... \ laeves non v. vix summo apice papil-
 losi striati compressi carinati;
 glumae 3-nerves 8. *O. OVATA* (Tr. & R.) Speg.
 in dimidia parte supera laxo grosse-
 que papilloso, in infera non v. vix
 striati, compressi non v. obsolete
 carinati; glumae 5-nerves 6. *O. STIPOIDES* (Tr. & R.) Speg.
11. *Floscuti*..... \ saltem in dimidio supero toto papillo-
 si v. verrucosi 12
 laeves, striati, non v. vix circa coro-
 nam papillis perpaucis obsiti 13

- pusilli, fere lenticulares v. semilenticulares, dorso eximie carinati, cum anth. et coron. vix 2 mm long., ubique grosse tuberculato-verrucosi. 10. *O. TUBERCULATA* (Dsv.) Speg.
12. *Flosculi* } medioeres obovati, dorso obtusi non carinati, cum anth. et coron. 3 mm long., in dimidio supero minute papilloso, in infero laeves. 11. *O. URUGUAYENSIS* (Gr.) Speg.
- pusilli lenticulares v. semilenticulares, perfecte striati, dorso carinati, cum anth. et coron. vix 1,75 mm long. 12. *O. PANICOIDES* (Lam.) Speg.
13. *Flosculi* } parvuli obovati, obsolete striati, dorso non carinati, cum anth. et coron. 2,25-2,50 mm. long. 13. *O. LEJOCARPA* Speg.

CLAVIS DICHOTOMICA

SPECIERUM

STIPAE LINN.

- | | | | |
|--------------------------------|---|---|--|
| 1. <i>Arista flosculo..</i> | { | brevior, ad mucronem subuliformem
reducta; corona nulla; anthopodium
breve glabrum..... | 1. ST. SALTENSIS OK. |
| longior (saepius) pluries..... | | 2 | |
| 2. <i>Arista tota.....</i> | { | v. pro parte longe villosa..... | 3 |
| | | nuda scabra v. pubescens..... | 13 |
| 3. <i>Arista</i> | { | per tota longitudine villosa v. plumosa..... | 4 |
| | | in parte infera tantum, sub geniculis,
longe villosa..... | 8 |
| 4. <i>Glumae inferae.</i> | { | non ultra 12 mm long..... | 5 |
| | | ultra 18 mm long..... | 7 |
| 5. <i>Arista</i> | { | brevis, 10-12 mm long.; flosculus non
v. vix 3 mm long..... | 2. ST. PLUMOSA. Tr. & R.
var. <i>micrura</i> Speg |
| | | elongata, ultra 25 mm long..... | 6 |
| 6. <i>Arista.....</i> | { | 25-30 mm long., subrigidula; flosculus
4-5 mm long..... | 2. ST. PLUMOSA. Tr. & R.
var. <i>media</i> Speg. |
| | | 35-65 mm long., tenuis mollis; flosculus
5-6 mm long..... | 2. ST. PLUMOSA. Tr. & R.
var. <i>gracilis</i> Speg. |
| | | | |

- ab ima basi villosa; glumella infera
tota laxè pubescens, apice vix at-
tenuata et minute scarioseque 2-au-
riculata; corona nulla. 3. *ST. POGONATHERA* Dsv.
7. *Arista* } in quarta v. quinta parte infima nuda,
ceterum villosa; glumella infera in
dimidio supero longe attenuata, fe-
re rostrata, glabra v. subglabra; co-
rona nulla. 4. *ST. NEAEI* Nees.
8. *Glumae pappum* } aequantes v. superantes 9
et *genu inferum* }
aristae } semper conspicue breviores. 11
9. *Folia convoluta*.. } hirtella, virescentia, subherbacea.
} striatula opaca... 5. *ST. IBARI* Ph.
} glaberrima, laevia, nitentiuscula rigida 10
10. *Culmi folia* } non v. aequantes; nodi pallidi v. vix
} fuscescens; panicula vagina unica
} suprema laxè vestita 6. *ST. CHRYSOPHYLLA* Dsv.
} longe superantes; nodi semper nudi
} atro-purpurascens; panicula vagi-
} nis 2 supremis spathaceis arcuè in-
} voluta 7. *ST. CHUBUTENSIS* Speg.
11. *Glumella infera* } longe attenuata, fere rostrata, non
apice..... } auriculata; arista in dimidio infero
(sub genu postico) nuda v. fere; glu-
ma infera 1-, supera 3-nervis..... 8. *ST. HUMILIS* Vahl.
} non v. brevissime et vix attenuata
} subtruncata, eximie minuteque 2-
} auriculata, tota \pm ve pubescens;
} arista a basi $\frac{1}{2}$ -ve longe villosa;
} gluma infera 3-, supera 5-nervis..... 12

- dense patentissime villosus; confluentia limborum cum vaginis annulo villosa praedita; glumella infera superne non v. vix attenuata, fere truncata, dense villosa; arista a basi longe villosa. 9. ST. PATAGONICA Speg.
12. *Margo exterior vaginarum*. } glaber ut confluentia limborum cum vaginis; glumella infera superne leniter attenuata atque laxius villosa; aristae pili a basi sursum versus sensim longiores. 10. ST. SPECIOSA Tr. & R.
13. *Anthopodium*. } elongatum, pluries (saepius) diametrum flosculi superans. 14
 } breve, diametrum flosculi (saepius) non aequans v. vix superans. 37
14. *Glumella infera matura*. } carbonacea, nigra glaberrima nitens, vix in parte suprema circa coronam minutissime papillata. 14. ST. MELANOSPERMA Prsl.
 } coriacea v. membranacea, $\frac{1}{2}$ -ve mollis v. rigida sed nunquam nec carbonacea nec nigra. 15
15. *Corona*. } nulla v. obsoletissima; articulatio, aristae cum glumella, nerviformis nuda v. vix ciliolata. 16
 } $\frac{1}{2}$ -ve evoluta et a glumella distincta. 23
16. *Flosculus totus*. } v. pro parte $\frac{1}{2}$ -ve pubescens, pilosus v. villosus. 17
 } glaberrimus, laevis v. asperulus. 21
17. *Glumae flosculo*. } conspicue breviores; flosculus glaber, in parte exerta longe papposo-villosus. 23. ST. PAPPOSA Nees.
 } longiores; flosculus laxo obsoleteque pubescens nunquam villosopapposus. 18
18. *Flosculi*. } toti villosi; folia planiuscula. 19
 } in parte infera tantum, parce saepius pilosi; folia subulata. 2

- | | | |
|---|--|------------------------------|
| | 9-10 mm long; arista persistens 4-5-plo longior..... | 37. ST. ARCAENSIS Speg. |
| 19. <i>Flosculi cum anth. et corona</i> | 4-5 mm long; arista decidua, 5-7-plo longior..... | 38. ST. LEPTOTHERA Speg. |
| | hyalinae 1-nerves; inflorescentia linearis densissima compacta; flosculi pusilli 3-3,5 mm long..... | 34. ST. FILIFOLIA Nees |
| 23. <i>Glumae</i> | subvirescentes 3-5-nerves; inflorescentia angusta sed sat relaxata; flosculi parvi 4-5 mm long..... | 35. ST. MEGAPOTAMICA Sprng. |
| | ellipsoidei subcompressuli apice abrupte inaequilateraliterque constricti, parce papilloso-asper; corona vix nervoso-annuliformis ciliolata..... | 49. ST. CURAMALALENSIS Speg. |
| 21. <i>Flosculi</i> | cylindracei, sursum leniter attenuati et vix sublanceolati..... | 22 |
| | non nitens, in parte subattenuata supera papilloso-aspera, apice pallescens et subcoronata ciliata; pedicellus paniculae semper breve non v. folia vix superans..... | 42. ST. CORDOBENSIS Speg. |
| 22. <i>Glumella infera ad maturitatem</i> | subnitidula glaberrima laevis; corona plane nulla v. vix nervoso-annuliformis, nuda v. obsolete ciliolata; pedicellus paniculae post anthesin summo opere elongatus filiformis deflexus..... | 43. ST. FILICULMIS Del. |
| | elongata membranaceo-vaginiformis, cylindrica, obconica v. spathacea..... | 21 |
| 23. <i>Corona</i> | abbreviata, calli, annuli, v. cupuliformis, ore horizontalis v. vix obliqua..... | 26 |
| | cylindracea, apice horizontaliter truncata integra ciliolata, quarta flosculi parte brevior; arista tenuis 6-10-plo flosculo longior..... | 11. ST. HYALINA Nees |
| 24. <i>Corona</i> | obconica v. spathacea, ore obliqua, in latere ventrali profunde sinuato-fissa..... | 25 |

- majuscula, tertium flosculi longitudinis
 aequans; anthopodium villosum co-
 rona brevius et diametrum flosculi
 parum superans. 12. St. FORMICARUM Del.
25. *Corona* } maxima spathaceo-membranacea, lon-
 gitudinem flosculi aequans; anthopo-
 dium villosum, flosculum, sine coro-
 na, aequans v. superans. 13. St. CHARRUANA Arech.
26. *Flosculi*. } \pm v^o villosi saltem ad angulos et dorso 27
 } glaberrimi, laeves v. papillosi. 32
27. *Flosculi*. } teretes toti adpresse longiusculeque
 } albo-villosi; anthopodium breve dia-
 } metrum flosculi parum superans 28
 } tetragoni v. subtetragoni, ad angulos
 } tantum villosi, faciebus glabris ru-
 } gulosi v. papillosi; anthopodium
 } validum dimidium flosculi longitudi-
 } nem aequans. 30
28. *Arista* } tenuis mollis caducissima, flosculo 5-7-
 } plo longior. 31. St. LEPTOTHERA Speg.
 } crassiuscula rigidula persistens, valide
 } torta, flosculo 2-1-plo longior. 29
29. *Arista flosculo*. } 2-plo tantum longior; corona calloso-
 } marginiformis obtusa, non ciliolato-
 } dentata. 32. St. USPALLATENSIS Speg.
 } 3-4-plo longior; corona anguste mar-
 } giniformis eroso-denticulata, cilio-
 } lata. 36. St. NUBICOLA Speg.
30. *Flosculi*. } majusculi (12 mm long.) eximie tetra-
 } goni, corona cylindraceo-subturbi-
 } nata pallidior longiuscula, ore acuta
 } ciliataque, basi a glumella bene limi-
 } tata et utrimque 1-lobulato-sinuata. 15. St. CLARAZI Ball.
 } medioeres v. subparvi, obsolete tetra-
 } goni v. penta-hexagoni; corona late
 } annuliformis brevis, ore obtusa, basi
 } cum glumella continua et ab illa pa-
 } rum distincta. 31

31. *Flosculi*..... } mediocres, 7 mm long.; arista satis
pubescens 10-plo longior 16. *ST. MANICATA* DSV. var.
parvi, 4—5 mm long.; arista vix pu- *typica* Speg.
bescens 7—9-plo longior 16. *ST. MANICATA* DSV.
var. cet.
32. *Flosculi*..... } laeves nitidi, non v. vix sub apice
parce laxaeque papillosoi. 34
toti a basi ad apicem dense papillo-
so-asperuli. 38
33. *Flosculi*..... } parvi, 5—6 mm long., toti glaberrimi
nitiduli, ad maturitatem fusciduli
fusoides; corona pusilla parum di-
stincta; arista tenuis fuscula. 17. *ST. TENUIS* Ph.
mediocres, 5—6 mm long., toti glaber-
rimi nitiduli, in parte suprema
dorsali laxaeque papillosoi, pal-
lidi; corona eximie cupuliformis
spinuloso-denticulata; arista rigi-
dula subcrassiuscula. 18. *ST. SUBLAEVIS* Speg.
34. *Flosculi*..... } maximi, 15—18 mm long., subteretes
minute papillosoi; corona cylindra-
cea, basi eximie constricta, ore den-
se ciliolato-fimbriata; arista 10-plo
longior, intertio supremo geniculata 19. *ST. ARECHAVALETAI*
Speg.
mediocres non ultra 13 mm long.;
arista in dimidio supero geniculata 35
35. *Flosculi*..... } angusti subtrigoni v. e latere compres-
suli cinerascens, grosse denseque
albido-papillosoi; corona cylindracea
adpressa atro-purpurea, linea vix
impressa a glumella separata. 20. *ST. TORQUATA* Speg.
subclavulati v. subtrigoni e late-
re non v. vix compressi; corona cu-
pulari a glumella constrictione
abrupta et profunda separata. 36

- mediocres, 10—12 mm long., pallidi;
corona subbrevis concolor submem-
branacea, ore adpressa acuta cilio,
lato-fimbriata..... 21. ST. LIGULARIS (Gris)
Speg.
36. *Flosculi*..... } parvi v. submediocres, 6—9 mm long.,
pallidi v. fuscii; corona brevissima cal-
losa, concolor v. discolor, ore tran-
cata non adpressa, integra v. denti-
culata, non v. laxo ciliolato-hirtella 22. ST. SETIGERA Presl
37. *Glumella infera*..... } $\frac{1}{2}$ v. pubescens, pilosa v. villosa..... 32
glaberrima, laevis v. scabra..... 58
38. *Glumella infera*..... } superne longe papposeque villosa, in-
ferne pubescens v. glabra..... 39
tota breve v. brevissime pubescens v.
superne saepe glabrata..... 44
39. *Glumae*..... } angustissime lineares, hyalinae vix te-
nuiter obsoleteque 1-3-nerves..... 40
lanceolatae v. ovatae, 3-5-nerves her-
baceae, subvirescentes v. purpura-
scentes..... 43
40. *Glumae flosculo*..... } conspicue breviores; parte flosculi vil-
loso-papposa tota exerta; anthopo-
dium diametrum flosculi subduplo
superans..... 23. ST. PAPPOSA Nees
 $\frac{1}{2}$ v. longiores et pappum ipsum ae-
quantes v. superantes..... 14
41. *Inflorescentia*..... } ampla paniculata nutans; culmi suba-
rundinacei folia longe superantes;
folia culmigena latiuscula; flosculi
pusilli 2 mm longitudine non attin-
gentes; pili pappi flosculo duplo lon-
giores..... 24. ST. ICHU (R. & P.) Kunth
angusta subspicata erecta; culmi graci-
les folia non v. parum superantes;
flosculi 2 mm longiores; pili pappi
flosculum non v. vix aequantes..... 42

- obtusum glabrum v. vix in acumine pilis paucis adpersum; flosculus pilos pappi adpressos parum perspicuos duplo superans, sursum vix attenuatus. 25. ST. LEPTOSTACHYA Gr.
42. *Anthopodium* ... } acutiusculum dense breveque villosum; flosculus pilos pappi bene perspicuos patulosque aequans, sursum subrostrato-attenuatus. 26. ST. GYNERIOIDES Ph.
- brevis hyalina; glumae geniculum posticum aristae aequantes violascentes, infera 1-, supera 3-nervis; arista flosculo duplo longior pubescens .. 27. ST. CALCILAETA Speg.
43. *Glumella supera*. } elongata inferam aequans, opaca coriacea pubescens; glumae violascentes 28. ST. CAUDATA Trin.
- nulla v. obsoleta et cum glumella continua nec sulco basali separata 45
44. *Corona*. } -ve evoluta et a glumella constrictione basali -ve valida separata 48
- coriacea opaca pubescens inferam subaequans; flosculus lanceolatus superne attenuatus, totus parce pilosulus; articulatio aristae cum glumella vix perspicua non v. parce ciliolata; arista flosculo 3-4-plove longior. 29. ST. BRACHYCHAETA Godr.
45. *Glumella supera* } tenuis hyalina glabra, quam infera longe brevior 46
- glabrum; flosculus e lanceolato fusoides apice attenuatus; articulatio aristae cum glumella vix perspicua noduloso-ciliolata; arista tenuis flosculo 3-4-plove longior. 30. ST. HYSTRICINA Speg.
46. *Anthopodium*. ... } villosum 47

47. *Flosculus*..... } cylindraceus clavulatus v. obovatus
apice rotundato-callosus minute fo-
veolatus; arista flosculo 2—3-plo ve
longior..... 31. ST. CAESPITOSA (Gr.)
Speg. var.
48. *Flosculum anth.* } lanceolatus v. subfusioideus, apice sen-
sim in arista decidua 4—5-plo lon-
gior, basi imperspicue articulata,
ciliolis erectis cineta, productus... 37. ST. ARCAENSIS Speg.
- 5—7 mm long.; glumae lanceolatae
8—13 mm long., 3—5-nerves..... 49
- et coron.*..... } 3—4 mm long. tantum; glumae 4—8
mm longitudine..... 51
49. *Arista*..... } tenuis mollis caducissima, flosculo 5—
7-plo longior; anthopodium ad
maturitatem diametrum flosculi le-
niter superans; inflorescentia laxa
paniculata..... 38. ST. LEPTOTHERA Speg.
- crassiuscula rigidula persistens, valide
torta, flosculo 2—4-plo longior; in-
florescentia linearis angustissima 50
50. *Arista flosculo*... } 2-plo tantum longior; corona calloso-
marginiformis obtusa integra; an-
thopodium diametrum flosculi sae-
pius parum superans 32. ST. USPALIATENSIS
Speg.
- 3—4-plo longior; corona anguste mar-
giniformis eroso-denticulata ciliola-
ta; anthopodium diametrum flosculi
maturi subduplo superans..... 36. ST. NUBICOLA Speg.
51. *Corona*... } cylindracea v. subturbinata, margine
ciliolata, eximie a glumella infusca-
ta distincta; arista flosculo cylindra-
ceo-subtetragono 6—8-plo longior . 33. ST. BAVIOENSIS Speg.
- hemisphaerica, oboeonica v. rarius $\frac{1}{2}$ v.
cylindracea, non v. vix subciliolata,
obtusa, umbilicatulata, a glumella ob-
scuriore parum distincta; arista flo-
sculo cylindraceo v. clavulato 4-plo
longior..... 31. ST. CAEPISTOSA (Gris.)
Speg. var.

- majuscula, inferam aequans coriacea
 opaca; glumae flosculo non compres-
 so nec gibboso dimidio breviores;
 corona plane nulla; anthopodium pu-
 bescens. 39. ST. RAMIFLORA (Hook.
 f.) Benth.
52. *Glumella supera* }
 pusilla, saltem quam infera dimidio
 brevior; glumae flosculo vix lon-
 giores 53
- lanceolati, cylindracei, fusoides v. sub-
 clavulati, a latere non compressi,
 dorso non gibbosi; arista centralis 54
53. *Flosculi* }
 clavulati v. obovati, a latere compres-
 si dorso gibbosi; arista excentrica 57
- lanceolatae 3-nerves, herbaceae vix
 attenuatae majusculae; flosculus fu-
 soideus anthopodio brevi-villoso suf-
 fultus; corona vix calloso-margini-
 formis ciliolata; arista 3-4-plo
 flosculo longior crassa pubescens. 44. ST. PARAMILLOENSIS
 Speg.
54. *Glumae* }
 lineares, vix 1-nerves, longe attenuatae 55
- glabrum; corona plane nulla; flosculus
 parvulus tenuis lanceolato-subfusio-
 deus glaberrimus; arista flosculo 8-10-
 plo longior, glabra, tenuis. 40. ST. SCIRPEA Speg.
55. *Anthopodium* }
 albo-villosum; corona eximie evoluta 56
- cylindracea, apice truncata ciliolata,
 quarta flosculi parte brevior; arista
 tenuis persistens 6-10-plo flosculo
 longior 11. ST. HYALINA Nees
56. *Corona* }
 turbinata, apice obliqua, ventre sinua-
 to-fissa, acie longe denseque ciliata,
 tertiam flosculi partem aequans;
 arista tenuis 6-8-plo flosculo longior 12. ST. FORMICARUM Del
- glaberrimum nitidum longe superans,
 candidus sericeus; corona pusilla
 longe parceque villosa 44. ST. PAMPEANA Speg.
57. *Villus anthopodii* }
flosculum }
 dimidium non v. vix aequans 58.

58. *Rami inflorescentiae* } omnes et toti pluries et eximie trichotomi 45. ST. TRICHOTOMA Nees
 alterne ramulosi 59
59. *Flosculus* } laevissimus nitentiusculus subellipsoideus; arista 9-16-plove longior. 47. ST. SANLUISENSIS Speg.
 ruguloso-subpapillosus, non nitens 60
60. *Flosculus* } obovatus, e latere validiuscule compressus dorsoque gibbosus; arista 12-40-plove longior. 48. ST. PAMPAGRANDENSIS Speg.
 linearis v. vix subclavulatus, e latere leniter compressus, dorso vix gibbosus 61
61. *Anthopodium diametrum flosculi* } dimidium vix aequans; arista tenuissima flosculo 24-30 plove longior. 46. ST. TENUISSIMA Trin.
 parum superans; arista subtenuis flosculo 8-10-plove longior. 49. ST. CURAMALALENSIS Speg.

ORYZOPSIS Michx

1. *PIPTOCHAETIUM* (Presl)

Char. Glumae flosculo non v. \pm ve longiores; flosculus e terete clavulatus v. obovatus, non v. \pm ve compressus et inaequilateralis; glumella infera marginibus subvalvatim adnexis, non superpositis, donata; glumella supera subaequilonga coriacea medio longitiorum 2-nervoso-carinata atque sulcata; corona \pm ve evoluta fabrica varia; anthopodium diametrum majus flosculi non aequans v. saepius pluries superans, gracile e terete obconoideum, apice acutissimum et pungens, villosum; arista \pm ve saepius excentrica, nuda, scaberula persistens v. decidua.

1. *Oryzopsis lasiantha* (Gris.) Speg.

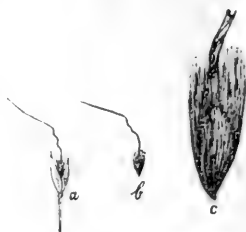
Piptochaetium lasianthum Griseb., Symb. ad Fl. arg. p. 297, n. 1894 (1879)!

Piptochaetium erianthum Balansa, Bull. Soc. Bot. Franc. v. XXXII, p. 224 (1885).

Diag. Glumae ovato-lanceolatae flosculo sat longiores, 5-3-nerves, e hyalino violascentes; flosculus obovatus e latere compressulus non carinatus, totus villis conspicue longioribus rufe-

scentibus vestitus; corona nulla v. vix umboniformis; anthopodium breve conoideum acutum villosum; aristata persistens excentrica, glabra, flosculo 3-7-plo longior. Culmi folia capillaria laevia saepius longe superantes panicula depauperata relaxata vaginata.

Hab. In collinis prope *Montecideo*, aest. 1880-900 (J. Arechavaleta), in montuosis pampeanis *Sierra del Tandit*, Mart. 1892 et Jan. 1901 (C. S.).



1. *Oryzopsis lasiantha* (Gris.) Speg.
a. Spicula 1/1.
b. Flosculus 1/1.
c. Flosculus 10/1.

Obs. Perennis caespitosa.

Culmi folia longe superantes graciles (300-500 mm alt. = 0,75-1 mm diam.) laevissimi glaberrimi virides, saepe ad apicem usque vaginis vestiti, nodis tumidulis fusciscentibus glabris.

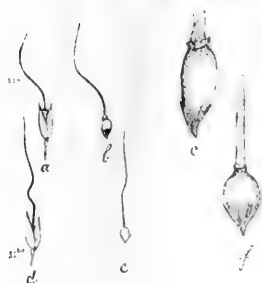
Folia omnia isomorpha, laxe caespitosa, herbacea mollia viridia, limbis complicato-teretibus erectiusculis v. plus minusve nutantibus (59-250 mm long. = 0,5-0,7 mm diam.) extus glabris laevibus v. obsolete striatulis intus 1-3-costulato-nervosis, apice longiuscule attenuatis acutissimis sed non pungentibus, vagini pallidioribus relaxatis, culmigenis saepius, supremis praecipue, sat inflatis, ore sensim coarctatis, margine albescente cum ligula continuo, glaberrimis, ligulis radicalium obsolete, culmigenorum plus minusve evolutis ovatis v. lapceolatis, obtusis scariosulis integris glaberrimis.

Inflorescentia laxissime paniculata subrariflora, deorsum vagina folii supremi plus minusve vestita (150-200 mm long.) rachi glabra v. vix ad angulos scabrida, ramis et pedicellis (2-10 mm long.) patulis viridibus scabris, apice minute breviterque incrassatis.

Spiculac remotiusculae primo erectae dein saepius nutantes; glumis subherbaceis, medio plus minusve fumose violascentibus, apice hyalinis glaberrimis ovato-lanceolatis sursum attenuatis acutis integris, villo flosculi longioribus, geniculum inferum aristae non attingentibus, infera 5-nervi (7-8 mm long. = 2 mm lat.) superam 3-nervem (6,5-7,5 mm long. = 1,5 mm lat.) parum superante; flosculis obovatis e latere compressulis, parum gibbosulis, (cum anthopodio et arista 15-22 mm long. = cum anthopodio et corona 3 mm long. = 1-1,25 mm diam. antero-postico) deorsum cuneato-attenuatis, sursum abruptiuscule coarctatis, glumella infera rigida coriacea primo alba dein avellanea v. umbrina, ubique dense longeque villosa-sericea, pilis adpressis (2-4 mm long.) tenuibus primo albescentibus dein eximie rufescenti-tabacinis in parte supera barbam flosculum longitudine aequantem efficientibus; glumella supera aequilonga lineari-lanceolata acuta coriacea medio sulcato-2-carinata, glabra; anthopodio duro terete acutiusculo (0,20-0,30 mm long.) dense villosa.

Arista tenuis non caduca (10-19 mm long.) rigidula nuda vix scaberula obsolete 2-geniculata, geniculo supero parum supra medium, inferum ad quartum posticum sitis, articulatio aristae cum glumella, eximia sed pilis omnino abscondita.

Corona nulla sed umbonulus glumellae leniter excentricus pusillus vix annuliformis villosus.

2. *Oryzopsis Grisebachii* Speg., n. sp.2. *Oryzopsis Grisebachii* Speg.

a. Spicula 1 l.

b. Flosculus 1 l.

c. Flosculus 2 l.

Stipa laevissima (Ph.) Speg.

d. Spicula 1 l.

e. Flosculus 1 l.

f. Flosculus 2 l.

Piptochaetium pulidum Ph.?, Griseb., *Symb. ad Fl. arg.*, p. 297, n. 1895 (1879)!

Diag. Glumae elliptico-lanceolatae, flosculo sat longiores, 3-5-nerves, hyalino-virescentes; flosculus obovatus, compressulus non carinatus, laevis v. in parte supera obsolete parceque papillosus; corona pusilla ex umbonato cupuliformis, acie puberula; anthopodium breve conoideo-acutum sub-breviuscule rufescenti-villosulum

arista persistens, excentrica, 7-8-plo flosculo longior, glabra. Culmi folia laevia e convoluto planiuscula non v. parce superantes, panícula angusta subcontracta nuda.

Hab. In pratis prope *Concepción del Uruguay, República Argentina*, Oct. 1877 (P. G. Lorentz).

Obs. Perennis caespitosa, caespitibus parvis v. medioeribus (50-250 mm. alt. = 50-100 mm diam.)

Culmi folia saepius superantes (100-350 mm alt. = 0,5-0,75 mm diam.) nudi v. remote 1-2-foliati, foliis saepius ad vaginas reductis, glabri, obsolete longitrorsum striati, non scabri, nodis vix incrassatulis glabris concoloribus v. vix fusciscentibus.

Folia omnia isomorpha, herbacea non v. vix rigidula viridia, limbis anguste linearibus primo laxè convolutis dein applanato-apertis (50-200 mm long. = 1-1,5 mm lat.) glabris, dorso non

scabris, obsolete tenuissimeque nervuloso-striatis non carinatis nec costulatis, ventre scabriusculis, longitrorsum 5-7-nervoso-costulatis, nervo mediano caeteris nonnihil crassiore, apice breviter acuteque attenuatis non v. vix submucronulatis non pungentibus, vaginis pallidioribus glaberrimis sublaevibus, ore leniter coarctatis non barbatis, auriculis cum ligula brevi truncato-marginiformi scariosulo-subhyalina integra v. vix denticulata glabra continuis.

Inflorescentia anguste racemoso-spicata (50-150 mm long. = 5-10 mm lat.) nuda erecta primo confertiuscula dein relaxato-subinterrupta, rachi glabra, ramis brevibus vix scabriusculis, a basi fere spiculigeris, pedicellis (2-10 mm long.) subscabriusculis apice vix lenissime incrassatulis.

Spiculae saepius constipatulae; glumis elliptico-lanceolatis, sursum sensim cuneato-attenuatis breviterque aristulatis, deorsum leniter angustatis e hyalino-virescentibus, non v. vix subnitentibus, non carinatis glabris, flosculo dimidio et ultra superantibus, infera 3-nervi (part. membr. 5 mm long. = 2 mm lat. = arist. 1-1,5 mm long.). superam 5-nervem (part. membran. 5 mm long. = 2 mm lat. = arist. 0-0,5 mm long.) non v. vix superante, flosculis inaequilateraliter obovatis e latere leniter compressulis (cum anthopodio et arista 20-22 mm long. = cum anthopodio et corona 2,25-2,50 mm long. = 1,25 mm diam. antero-postico = 0,75 mm crass.), glumella infera primo pallescente dein ochraceo-testacea coriacea, dorso gibbosa sed non carinata, ventre laevi recta tenuissime (vix sub lente validissima) longitrorsum striatula et vix in parte suprema obtuse rotundata papillis nonnullis saepius ornata, glaberrima; glumella supera subaequilonga elliptico-sublanccolata mucronata laevissima medio sulcato-2-carinata concolore; anthopodio brevissimo conoideo (0,25 mm long.) acuto subpungente, villis rufescentibus adpressis tertium glumellae inferum obtegentibus ornato.

Arista leniter excentrica tenuiuscula persistens (17—19 mm long.) obsolete 2-geniculata, geniculo supero parum supra, infero parum infra medium sitis; articulatio aristae cum glumella non incrassata et vix perspicua.

Corona ex umboniformi leniter cupulata brevissima laevi margine obtusa pallescente leniterque puberula.

Piptochaetium pallidum Phil., nomen auctori ipso ignotum, idcirco nudum.

Stipa (nassella) laevissima (Philip.) Speg. (!) a specie argentina toto coelo diversa nec quidem comparanda.

St. tenella Godr. glumis 3—4-plove flosculum superantibus recedit.



3. *Oryzopsis bicolor* (Vahl) Speg.

a. Spicula 1 l var. mayor.

b. Flosculus 1 l > >

c. Flosculus 3 l > >

d. Spicula 1 l > media

e. Flosculus 1 l > >

f. Spicula 1 l > minor

g. Flosculus 1 l > >

3. *Oryzopsis bicolor* (Vahl) Speg.

Stipa bicolor Vahl, Symb., v. II, p. 24. (1791). = OK., Rev. gen. plant., prt. III, 2., p. 371. (1898)!

Stipa intermedia Trin. & Ruprch., Act. Petrop., ser. VI, t. V, p. 26 (1849).

Day. Glumae oblanceolatae flosculum sat superantes, 3-5-nerves, violascentes; flosculus obovatus castaneus non v. vix compressus, dorso non carinatus, glaber, vix in parte suprema parce papillosus; corona pusilla sed eximie cupuliformis, acie puberula; anthopodium tereti-subconnoideum diametrum flosculi aequans, longiuscule rufo-villosum; arista ex-

centrica persistens glabra, flosculo 5—10-plo longior. Culmi folia convoluta-planiuscula v. filiformia laevia saepius longe superantes; panícula laxa patula vaginata.

Hab. Passim in pratis editoribus prov. *Buenos Aires*, nec non *Montevideo*, per ann. 1880-1901.

Obs. Perennis caespitosa, caespitibus parvis v. pusillis (50--250 mm alt.=50-150 mm diam.) compactiusculis v. relaxatis.

Culmi folia semper superantes graciles (100-750 mm alt.=0,5-1,25 mm diam.) teretes v. saepe plus minusve compressi, glabri, non scabri, tenuiter longitrorsum striatuli, remote 1-2-foliati, nodis non v. vix subincrassatulis annulatum constrictis pallescentibus v. purpurascentibus glabris.

Folia isomorpha herbacea viridula v. lenissime subglaucescentia, limbis in vivo planiusculis in sicco laxe v. arcte convolutis saepeque filiformibus (25-200 mm long.=0,5-2,5 mm lat. apert.) extus glaberrimis laevissimis, intus 5-7-nervulosis (nervo mediano crassiusculo, lateralibus tenuissimis) atque scabriusculis, apice breviter subulato-acuminatis non pungentibus, vaginis frequenter relaxatis, culmigenis saepius conspicue inflatis, glaberrimis tenuissime striatis non scabris, ore leniter angustatis, auriculis non barbatis cum ligulis (radicalibus brevissimis v. evanidis) ovatis v. lanceolatis obtusis integris scariosulis subalbescentibus.

Inflorescentia (80-150 mm long.) primo anguste spicata, vagina folii supremi plus minusve vestita, dein paniculata secunda et patula, valde relaxata, rachi laevi, non v. vix scabriuscula, ramis tenuissimis non v. vix scabridis supra medium spiculigeris pedicellis plus minusve elongatis (3-30 mm long.) subtrigonis leniter scaberulis apice sensim lenissimeque incrassatulis.

Spiculae primo erectae dein patulae v. nutantes; glumis elliptico-oblongatis utrinque breviter attenuatis, tenuibus, deorsum pulchre violaceis nitentiusculis, sursum hyalinis acutis breviter v. brevissime aristulatis, flosculo dimidio longioribus, non v. obsolete carinatis, infera 3-nervi (6-12 mm long. = 2-3,75 mm lat.) superam 3-5-nervem (5,75-11 mm long. = 1,75-3 mm lat.) parum superante; flosculis inaequilateraliter obpyriformibus v. obconoidis (cum anthopodio et arista 30-70 mm long. = cum anthop. et corona 4-7 mm long. = sine anthopodio et corona 2,5-4 mm long. = 1,25-2 mm diam.), glumella infera primo pallida dein intense castanea, plus minusve nitente coriacea (sed non ossea) glaberrima (vix sub lente validissima longitrorsum tenuiter striata), in parte apicali laxa v. subdensiuscule papillato-aspera; glumella supera aequilonga elliptica coriacea castanea sulcato-2-carinata glabra; anthopodio gracili terete v. lenissime subconoido (1,25-2 mm long. = 0,15 mm diam.) durissimo pungente, semper pallidiore, dense longeque villosa, villis rufescentibus partem dimidiam inferam glumellae et ultra obvolventibus.

Arista pro ratione tenuiuscula excentrica persistens nuda, non pubescens, scabriuscula (26-65 mm long.) obsolete flexuoso-2-geniculata, geniculo supero ad medium v. parum supra, infero ad tertium posticum sitis; articulatio aristae cum glumella non incrassata, corona tecta.

Corona pusilla annulo-cupuliformis (0,25-0,35 mm alt. et diam.) postice eximie strangulata, superne margine rufo-puberula v. setulosa, rarissime glabra.

Species sat variabilis et varietates sequentes facile distinguendae:

a) *minor* Speg.: caespitibus parvulis (50-80 mm alt. et diam.), culmis valde elongatis (200-500 mm long.) valide compressis nudis, foliis subcapillaribus glaucescentibus, glumis (5-6 mm long. = 1,75-2,25 mm lat.) flosculis obovatis (sine anthopodio et coro-

na 2,5-2,75 mm long.=1,25-1,50 mm diam.). In pratis editioribus subuliginosis observata.

b) media Speg.: caespitibus mediocribus (100-150 mm alt.=80-100 mm diam.), culmis elongatis 1-2-foliatis (300-600 mm alt.) non v. parum compressis, foliis laxè involutis viridibus, glumis (7-8 mm long.=2-3 mm lat.) flosculis obpyriformibus avellaneis (sine anthopodio et corona 4 mm long.=2 mm diam.). In montuosis frigidioribus occurrens.

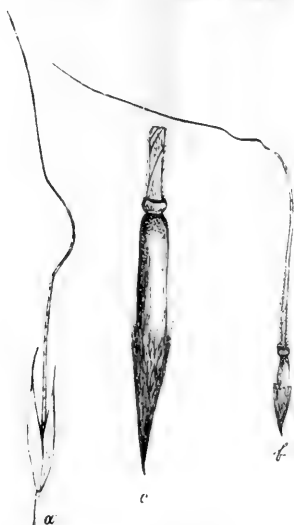
c) major Speg.: caespitibus mediocribus (100-250 mm alt.=100-150 mm diam.), culmis elongatis eximie spathaceo-vaginatiss (500-750 mm alt.) teretibus, foliis planiusculis v. vix laxè convolutis pallescentibus, glumis (10-12 mm long.=3-3,25 mm lat.), flosculis obconicis obscure castaneis (sine anthopodio et corona 4 mm long.=1-1,50 diam.). In montuosis calidioribus luxurians.

Specimina inspecta sunt:

a/ In pratis edilioribus prope *B. Aires* et *La Plata* (var. *a*), aest. 1880-1900 (C. S.)

b/ In vallibus *Sierra Ventana* et *Sierra Curámalal* (var. *b*) aest. 1895 et 1899 (C. S.)

c/ In campis prope *Sierra del Tandil*, aest. 1892 ac 1901 (C. S.) et prope *Montevideo* (J. Archavaleta).

4. **Oryzopsis Hackeli** (Arech.) Speg.

4 *Oryzopsis Hackeli* (Arech.) Speg.
 a. Spicula 1/1
 b. Flosculus 1/1
 c. Flosculus 5,1

Stipa Hackeli Arech., Las graminaceas urug., p. 255, t. XXXI (1894)!

Stipa tandilensis OK., Rev. gen. plant., prt. III, 2, p. 370 (1898).

Diag. Glumae maximae elliptico-lanceolatae flosculo subduplo longiores, 5-7-nerves, violascentes; flosculus cylindraceus e plumbeo-coerulescente ater, non nitens; corona brevissima annulato-cupuliformis acie subvelutina; anthopodium teres acutissimum flosculi diametro 3-4-plo longius, dense adpresseque rufo-villosum; arista persistens flosculo 7-8-plo longior nuda, ad tertium superum et ad medium geni-

culata. Culmi folia subjuncoidea laevia semper longe superantes, panicula paucispiculigera laxa vaginata.

Hab. Non rara in pratis collinis prope *Montevideo* (J. Arechavaleta), prope *Sierra del Tandil*, Dec. 1891 (OK.) ac Jan. 1901 (C. S.) et in *Sierra de Cura-malal*, Dec. 1899 (C. S.).

Obs. Perennis caespitosa, caespitibus submajusculis v. medio-ribus (150-350 mm alt. et diam.) subrelaxatis.

Folia omnia isomorpha, herbaceo-subjuncoidea, viridula v. pallescentia, rigidula, limbis complicatis juncoideis compressis v. obsolete trigonis erectis v. flexuosis saepeque leniter et subspirali-

ter tortis (100-300 mm long.=0,5-1 mm diam.=1-2 mm lat. apert.) extus laevibus glabris, intus tenuiter 3-5-nervulosis subpulverulentis apice sensim longeque attenuato-acutatis non pungentibus, vaginis saepius relaxatis non v. leniter inflatis, glaberrimis obsolete striatulis, ore subrotundato-angustatis, auriculis non barbatis cum ligulis (radicalibus brevissimis v. evanidis) ovatis v. lanceolatis obtusis glabris integris scariosis albescenti — subhyalinis.

Inflorescentia primo erecta angusta (50-120 mm long.) vagina folii supremi sat inflata saepeque purpureo-maculata vestita, dein plus minusve exerta secunda v. nutans depauperata (7-20-spiculigera), rachi, ramis, nec non pedicellis (5-25 mm long.) apice sensim leniterque incrassatis, puberulo-scaberulis saepeque purpurascentibus.

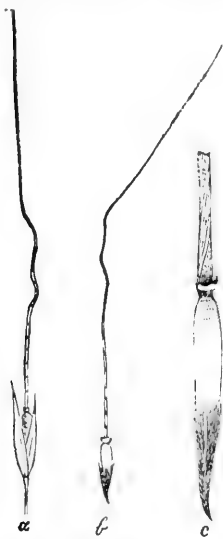
Spiculae primo erectae dein patulae ac nutantes; glumis subanguste elliptico-lanceolatis utrinque angustatis, deorsum pulchre violaceis (dorso plus minusve virescentibus) sursum hyalinis longe sensimque attenuato-aristulatis glaberrimis nitentiusculis, flosculo subduplo longioribus, non v. obsoletissime carinatis, infera 5-nervi (22-27 mm long.=4 mm lat.) superam sub-7-nervem (21-26 mm long.=3,25 mm lat.) paululo superante; flosculis cylindraceis (cum anthopodio et arista 80-100 mm long.=cum anthopodio et corona 11-12 mm long.=sine anthopodio et corona 6-7 mm long.=1,25-1,35 mm diam.), glumella infera primo pallida dein plumbea mox plumbeo-coerulea, postremo nigra v. atrovioacea, opaca, coriacea (sed non ossca) glaberrima laevissima (etiam sub lente valida) in parte apicali dense minutissimeque papillulato-scabra, superne aequaliter abrupteque rotundato-constricta eximieque coronata, dorso rotundata, ventre non v. vix subapplanatula tenuiter sulcata; glumella supera anguste elliptica aequilonga coriacea castanea nitente medio sulcato-2-carinata; anthopodio gracili terete, lenissime obconoideo, praelongo (4-5 mm long.

= 0,25 mm diam.) purpurascente acutissimo pungente, villis adpressis densis breviusculis (vix tertium glumellae inferum attingentibus) pulchre intenseque fulvo-ferrugineis sericeo-nitentibus vestito.

Arista crassiuscula centralis persistens nuda dense breviter minuteque velutino-pubescent (70-90 mm long.), 2-geniculata, geniculo supero ad tertium supremum, infero ad medium v. ad tertium infimum sitis, sub genu torta, primo pallida dein fusco-cinereascens; articulatio aristae cum glumella imperspicua v. nulla.

Corona brevissima annulato-cupuliformis (0,30-0,35 mm alt = 1-1,15 mm diam.), deorsum coarctato-rotundata, superne truncata brevissime rufescenti-velutina.

Species *O. avenaceae* (Lin.) simillima et valde affinis sed glumis, praecipue, flosculo duplo longioribus mox dignoscenda.



5 *Oryzopsis Ruprechtiana* (Desv.) Speg.
a. Spicula 1/1
b. Flosculus 1/1
c. Flosculus 4/1

5. *Oryzopsis Ruprechtiana* (Desv.) Speg.

Stipa bicolor Tr. & Rupr., Act. Petrop., ser. 6, p. 26 (1849).

Piptochaetium ruprechtianum Desv., Gay, Fl. chil. vol. VI, p. 274 (1853).

Stipa intermedia OK. (non Tr. & Rupr.), l. c., p. 370 (1898).

Diag Glumae submajusculae oblan-
ceolatae, flosculum sat superantes,
3-5-nerves, violascentes; flosculus
cylindraceus teres umbrinus non ni-
tens; corona obliqua brevissime annu-
lato-cupuliformis acie pubescenti-ci-
liolata; anthopodium teres acutissimum,

flosculi diametrum 3-4-plo superans, dense adpresseque rufo-villosum; arista persistens 7-8-plo flosculo longior parum supra et infra medium geniculata. Culmi folia planiuscula v. laxa, convoluta subherbacea laevia longe superantes; panicula sat ampla relaxata, nuda v. vaginata nutans.

Hab. In collinis prope *Montevideo* non rara (J. Arechavaleta) et in *Sierra del Tandil*, Febr. 1892 ac Jan. 1901 (C. S.).

Obs. Perennis caespitosula, caespitibus mediocribus (150-200 mm alt. et diam.) laxissimis.

Culmi folia semper longe superantes (500-1000 mm alt. = 1-2 mm diam.) teretes, glabri non scabri, longitersum tenuiter striati, remote 2-3-foliati, nodis incrassatulis medio annulatum constrictulis, non v. vix rufescentibus glabris.

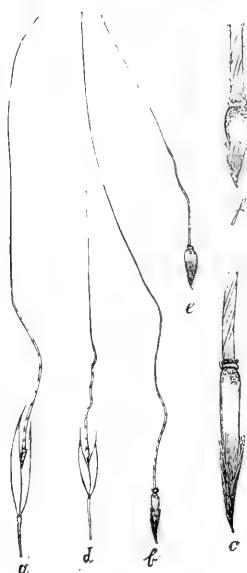
Folia omnia isomorpha, herbacea flaccida v. subrigidula viridia, limbis planiusculis (in sicco, culmigenis praecipue, plus minusve laxa convolutis) erectis (100-150 mm long. = 1,5-2 mm lat.) utrimque glaberrimis non scabris, dorso laevibus, ventre 3-7-nervosis (nervo mediano ceteris crassiore) apice sensim attenuato-subulatis acutis non pungentibus, vaginis infimis relaxatis, superis adpressis tenuiter striatis, glabris, ore angustatis auriculis non barbatis cum ligulis (radicalibus brevissimis obsoletis v. marginiformibus,) ovatis v. lanceolatis obtusis integris glaberrimis scariosulis pallescentibus opacis continuis.

Inflorescentia paniculata, valde relaxata secunda, primo vagina folii supremi vestita, dein nuda exerta nutans (150-200 mm long.), rachi glabra laevi (parte suprema excepta) ramis gracilibus angulosis non v. vix scabriusculis, pedicellis elongatis (5-15 mm long.) tenuibus scabris apicem versus vix incrassatulis.

Spiculae relaxatae, primo erectiusculae dein nutantes; glumis oblanceolatis, deorsum pulchre violaceis atque longiuscule cuneato-angustatis, sursum hyalinis breviter attenuatis acutis non v. brevissime subaristulatis glabris nitentiusculis, flosculo tertio v. dimidio longioribus, non v. obsoletissime subcarinatis, infera 3-nervi (15-17 mm long.=3 mm lat.) superam 5-nervem (15-16,5 mm long.=2,75-3 mm lat.) aequante v. vix superante; flosculis cylindraceis (cum anthopodio et arista 80-90 mm long.=cum anthopodio et corona 11 mm long.=sine anthopodio et corona 6-6,5 mm long.=1,25-1,40 mm diam.), glumella infera primo pallida dein umbrina non v. vix subnitente, coriacea glaberrima laevi, sub lente validissima tenuissime subimperspicueque longitudinaliter striata, in parte apicali tota pallidiore minute densiusculeque papilloso-scabrida, superne leniter inaequilateraliter et breviter subcuneato-rotundata eximieque coronata, dorso rotundata, ventre subapplanatula sulcata; glumella supera aequilonga anguste elliptica coriacea castanea nitente, medio sulcato-2-carinata; anthopodio gracili terete praelongo (4-4,5 mm long.=0,20 mm diam.) pallescente acutissimo pungente, villis adpressis densis breviusculis (vix quantum inferum glumellae obvolventibus) pulchre intenseque fulvis, sericeo-nitentiusculis vestito.

Arista subcrassiuscula vix exentrica persistens (70-80 mm long.) nuda tenuiter breviter densiusculeque puberula, 2-geniculata, geniculo supero sat supra medium infero paulo infra medium sitis, parte suprema recta, cetera infera semper conspicue breviora, subgeniculis torta; articulatio aristae cum glumella nulla v. imperspicua.

Corona brevissima sat obliqua annulato-cupuliformis deorsum turbinata non v. vix papillosa a glumella constrictione valida separata, superne truncata dense minuteque pubescenti-ciliolata.

6. *Oryzopsis napostaënsis* Speg., n. sp.6. *Oryzopsis napostaënsis* Speg.

- a. Spicula 1/1 var. typica.
 b. Flosculus 1/1
 c. Flosculus 3/1
 d. Spicula 1/1 brachysperma.
 e. Flosculus 1/1
 f. Flosculus 3/1

Diag. Glumae mediocres, lanceolatae flosculo subduplo longiores, 3-5-nerves, violascentes; flosculus cylindraceus e castaneo umbrinus non nitens; corona horizontalis brevissima annulato-cupuliformis, acie velutino-ciliolata; anthopodium teres acutissimum, flosculi diametrum 4-5-plo superans, dense adpresseque rufo-villosum; arista persistens 8-9-plo flosculo longior, infra medium et ad quartum infimum geniculata. Culmi folia capillaria v. setacea sublaevia longe superante; panícula depauperata relaxata nutans vaginata.

Hab. In aridis australioribus prov. B. Aires inter *Sierra de Curá-matal* et *Río Negro*, per ann. 1895-99.

Obs. Perennis caespitosula, caespitibus quandoque elongatis relaxatis (150-200 mm alt.=50-80 mm diam.), quandoque abbreviatis contractis (30-70 mm alt. et diam.).

Culmi folia semper longe superantes (200-500 mm alt.=0,5-1 mm diam.) teretes, glaberrimi non scabri, sursum leniter striati, remote 2-3-foliati, nodis non v. vix incrassatulis rufescentibus glabrisque.

Folia omnia isomorpha, subherbacea rigidula viridi-glauescentia, limbis capillaribus v. setaceis complicatis (25-150 mm long.=

0,3-0,5 mm diam.=0,75-1 mm lat. apert.) subteretes v. leniter compressis semper plus minusve recurvo-subcircinatis, extus laevibus, non v. scaberulis, glabris v. saepe hinc inde sparse minutissimeque setulosis, intus glaucis pulverulentis tenuissime subimperfecteque 3-5-nervulosis apice sensim attenuato-acutis non pungentibus, vaginis infimis relaxatis superis adpressis e pallescenti subalbescentibus glabris non scabris laevibus v. striolatis, radicalibus ore truncatis, culmicolis attenuatis, cum ligulis (infimis evanidis v. vix marginiformibus) inaequilateraliter ovatis v. lanceolatis obtusis integris ex albo subhyalinis, continuis, glaberrimis v. obsoletissime subpruinulosis.

Inflorescentia paniculata, valde depauperata, primo erecta, vagina folii supremi sat ampliata vestita, dein nuda exerta patula et nutans (50-150 mm. long.), rachi glabra laevi, ramis paucis gracilibus, pedicellis angulosis (5-15 mm long.) scaberulis apice non v. vix incrassatulis.

Spiculae relaxatae primo erectiusculae dein nutantes, glumis lanceolatis utrimque longiuscule cuneato-angustatis deorsum violascentibus sursum hyalinis acuminatis atque subaristulatis, glaberrimis nitentiusculis, flosculo subduplo longioribus, non v. obsolete carinatis, infera 3-nervi (17-18 mm long.=2,5 mm lat.) superam 5-nervem (15-16 mm long.=2,25 mm. lat.) nonnihil superante; flosculis cylindraceis (cum anthopodio et arista 75-95 mm long.=cum anthopodio et corona 9 mm long.=sine anthopodio et corona 4,25-4,50 mm long.=1 mm diam.), glumella infera primo pallida dein castaneo-umbrina, non v. vix subnitente, coriacea glaberrima laevi, sed sub lente tenuiter longitudinaliter striata, in parte rotundata apicali concolore minute sublaxeque papilloso-scabrida, superne aequilateraliter breviterque rotundata eximieque coronata, dorso rotundata, ventre non v. vix subapplanata tenuiterque sulcata, glumella supera aequilonga lineari-elliptica mucronulata coriacea castanea nitente, medio sulcato-2-cari-

nata; anthopodio gracili terete praelongo (4,25-4,50 mm long.= 0,20 mm diam.) pallescente acutissimo pungente, villis adpressis densis breviusculis, tertium inferum glumellae obvolvuntibus, pulchre sericeo-fulvis vestito.

Arista subcrassiuscula, centralis, persistens nuda dense minutissimeque canescenti-velutina (65-85 mm long.). 2-geniculata, geniculo supero infra medium, infero ad quartum posticum sitis, parte suprema recta reliquam inferam, flosculo addito, aequante v. sat superante; articulatio aristae cum glumella nulla v. imperspicua.

Corona brevissima non obliqua, annulato-subcupuliformis deorsum sat constricta, superne truncata, acie acutiuscula dense minutissimeque velutino-ciliolata.

Species praecedenti sat similis et facile ejusdem varietas xerophila, formas duas sat distinctas sequentes praebens:

a) *macrophylla*: caespitibus mediocribus relaxatis, foliis capillaribus elongatis (100-150 mm long.) rectiusculis. Ad ripas fluminis *Rio Negro*, prope *Carmen de Patagones*, Febr. 1898 (C.S.); in planitie reperitur.

c) *brachyphylla*: caespitibus pusillis contractis (30-70 mm long. et diam.) foliis setaceis abbreviatis (25-50 mm long.) saepius plus minusve circinatis. In collinis *Sierra Curamatul*, *Sierra Ventana*, nec non prope *Bahia Blanca*, aest. 1895-99; in collinis et montuosis observatur.

G.^{bis} **Oryz. napostaënsis** Speg. var. *brachysperma* Speg.

Haec varietas caespitibus, foliis atque inflorescentiis perfecte cum forma *brachyphylla* omnino conveniens sed spicularum fabrica sat recedens.

Hab. Passim cum typo in pratis *La Pantanosa* prope *Carmen*

de Patagones, Febr. 1898 et prope *Sierra de Curá-malal*, Dec. 1899 (C. S.).

Obs. *Spiculae* semper erectiusculae rachi adpressae; glumis ut in typo sed minoribus (infera 14-15 mm long.=2,5 mm lat.=supera 12-13 mm long.=2 mm lat.); flosculis obconico-subobovatis (cum anthopodio et arista 50-60 mm long.=cum anthopodio et corona 5-5,25 mm long.=sine anthopodio et corona 3 mm long.=1,15 mm diam.), glumella infera non v. vix inaequilaterali apice truncato-rotundata atque subimperpicue papillata, anthopodio pallido (2-2,5 mm long.), villis pallide ferrugineis non v. vix nitentibus ad medium fere usque glumellam obtegentibus vestito.

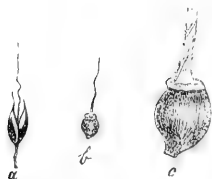
Arista crassiuscula subcentralis persistens (45-55 mm long.) nuda, non v. vix pubescens, 2-geniculata, geniculo supero valde infra medium, infero ad quintum posticum situs, parte suprema recta, reliquam inferam, flosculo addito, longe superante.

Corona ut in typo.

Varietas ad *Or. bicolorem* (Vahl) vergens.

II. *PIPTATHERUM* (Beaur.)

Char. Glumae flosculum superantes; flosculus obovatus inaequilateralis, gibbosus, latere compressus, glumella infera marginibus subvalvatim adnexis, non superpositis, supera subaequilonga coriacea medio longitrorsum 2-nervoso-carinata atque 1-sulcata; corona ±ve evoluta, pulviniformis; anthopodium brevissimum annulo-umboniforme apice truncato-umbilicatum glabrum; arista ±ve excentrica nuda scaberula.

7. **Oryzopsis lejopoda** Speg., n. sp.7. *Oryzopsis lejopoda* Speg.

a. Spicula 1,1

b. Flosculus 1,1

c. Flosculus 4,1

Diag. Glumae ovatae flosculo 2-plo longiores, 5-nerves, violascentes; flosculus atro-castaneus obovatus, e latere compressus, glaber non scaber striatus; corona lata brevissima pulvinato-applanata cinerea, subpubescens; anthopodium brevissimum annulato-umboniforme glabrum; arista persistens excentrica 4-5-plo flosculo longior. Culmi folia filiformia laevia pluries

superantes; panícula angusta nuda depauperata.

Hab. Rarissime in pratis montanis *Sierra Ventana*, Nov. 1895 (C. S.).

Obs. Perennis sparsa v. parce subcaespitosa, caespitibus parvis (100-150 mm alt.=50-100 mm diam.).

Culmi folia semper longe superantes graciles (250-450 mm alt.=0,6-1 mm diam.) nudi v. foliis 1 v. 2, ad vaginas fere tantum reductis, vestiti, glabri, minute longitrorsum striati, nodis vix incrassatis glabris purpureo-annulatis.

Folia omnia isomorpha subfasciculata subrigidula erectiuscula v. flexuoso-subcircinata viridia filiformia, limbis complicato-subteretibus e latere lenissime compressulis (30-120 mm long.=0,3-0,5 mm diam.=1 mm lat. apert.) glaberrimis laevibus, non v. obsolete tenuiterque striatis, intus subcinerascentibus subpulverulentis 3-costulato-nervulosis, apice sensim acuteque subulato-mucronatis sed non pungentibus, vaginis adpressis pallidioribus vix striolatis, ore coarctatis, auriculis glaberrimis cum ligulis opacis scariosulis breviter ovatis integris v. vix denticulatis continuis.

Inflorescentia anguste subracemoso-spicata (50-80 mm long. = 5-8 mm diam.) primo erecta dein leniter secunda, saepius valde depauperata, plus minusve interrupta, rachi vix scaberrula, ramis scabridis erectis adpressis, infimis basi minute hyalino-vaginatatis v. subligulatis, apice pauci-spiculigeris, pedicellis (1-10 mm long.) adpressis scaberrimis sursum lenissime subincrassatis.

Spiculae subconfertiusculae v. relaxatae erectae adpressae; glumis late ovato-lanceolatis aristulatis deorsum violaceis sursum hyalinis, glaberrimis nitentiusculis, flosculo duplo et ultra longioribus, non v. obsoletissime carinatis, 5-nerviis, infera (8-8,25 mm long. = 4 mm lat.) superam (7 mm long. = 3 mm lat.) parum superante; flosculis late obovatis, e latere compressis, faciebus tamen convexis, superne late subtruncatis (cum anthopodio et arista 15-18 mm long. = cum anthopodio et corona 3 mm long. = 2 mm lat. = 1 mm crass.), glumella infera intense atro-castanea durissima, fere ossea, glaberrima, sed eximie sericeo-nitente, sub lente dense longitrorsum striolata, supera elliptica subaequilonga castanea nitentiuscula; anthopodio vix evoluto annulo-umboniformi glaberrimo, apice late truncato-umbilicato, in latere ventrali callo pusillo suborbiculari albescente ornato.

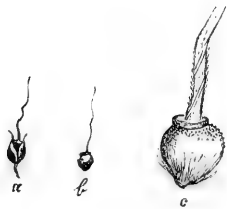
Arista persistens subcrassiuscula (12-15 mm long.) leniter excentrica, nuda scabriuscula, obsolete flexuoso-2-geniculata, geniculo supero supra medium, infero ad tertium posticum sitis; articulatio aristae cum glumella imperspicua.

Corona magna, crassiuscule pulviniformis a glumella constrictione angustissima parum profunda limitata, totam glumellae partem superam subtruncatam obtegens, cinerascens, velutino-pulverulenta.

Species statura et habitu *O. stipoidi* (Tr. & R.) Speg. simillima et vix, anthopodii fabrica perscrutata, distinguenda.

III. URACHINE (Trin.)

Char. Glumae flosculum superantes; flosculus obovatus inaequilateralis gibbosus, latere \pm ve compressus, glumella infera marginibus subvalvatim adnexis, non superpositis, supera subaequilonga coriacella medio longitrorsum 2-nervoso-carinata atque 1-sulcata; corona \pm ve evoluta, fabrica varia; anthopodium diametro majore flosculi brevius, apice truncatum villosum; arista \pm ve excentrica nuda, scaberula, persistens v. decidua.

8. *Oryzopsis ovata* (Trin. & Rupr.) Speg.

8. *Oryzopsis ovata* (Tr. & R.) Sp.

- a. Spicula 1/1
b. Flosculus 1/1
c. Flosculus 4/1

Stipa ovata Trin. & Rupr., l. c. (1829).
Urachne setosa Trin. & Rupr., l. c.,
p. 124 (1834).

Piptochaetium chaetophorum Gris., Symb.
ad Fl. arg., p. 298 n. 1898 (1879)!

Piptochaetium setosum Arch., Las gram.
urug., p. 270, n. 4 (1894)!

Diag. Glumae ovatae flosculo subduplo longiores, 3-nerves violascentes; flosculus castaneus obovatus compressus dorso carinatus glaber striatus, non v. vix summo apice circa coronam vix papillosus; corona lata brevissima pulvinato-applanata cinerea subpubescens; anthopodium brevissimum annuliformi-umbonatum truncatum, villis dimidia glumella brevioribus vestitum; arista persistens, excentrica, 6-8-plo flosculo longior. Culmi folia filiformi-convoluta sublaevia longe superantes, panicula nuda v. vaginata depauperata, laxa.

Hab. Sporadice in locis editioribus pamparum, per ann. 1880-1892.

Obs. Perennis, sparsa v. parce caespitosa, caespitibus parvis (100-150 mm alt. = 50-100 mm diam.).

Calmi folia semper longe superantes graciles (200-350 mm alt. = 0,5-0,75 mm diam.) nudi v. foliis 1 v. 2, ad vaginas fere tantum reductis, remotis ornati, minute longitrorsum striati, glabri v. obsolete retrorse scabriusculi, nodis annulatum constrictis, testaceis, glabris.

Folia subdimorpha, radicalia plana pallescentia, juvenilia et caulina filiformi convoluta e viridi subglaucescentia, limbis herbaceis (25-80 mm long. = 1-1,5 mm lat.) dorso 3-, ventre 5-, nervuloso-costulatis, sursum breviter attenuato-subulatis non pungentibus, glabris v. obsolete dorso, basin versus, retrorse scabriusculis, vaginis adpressis pallidis glabris striatis, ore vix coarctatis, auriculis glaberrimis cum ligulis albis opacis scariosulis breviter ovatis integris v. vix denticulatis continuis.

Inflorescentia anguste racemoso-spicata (50-80 mm long.) erecta interrupta depauperata, rachi laevi, ramis scabris a basi spiculigeris adpressis, infimis ad ortum ciliatis v. ligulatis, pedicellis (1-6 mm long.) adpressis scaberrimis sursum lenissime subincrassatis.

Spiculae laxae subglomeratae erectae adpressae; glumis latissime ovatis breviter acutato-subaristulatis, deorsum violaceis, sursum hyalinis glaberrimis nitentiusculis, flosculo non v. vix subduplo longioribus, obsolete carinatulis 3- (v. obsolete 5-) nervibus (nervis lateralibus valde abbreviatis), infera (5-6 mm long. = 2-2,5 mm lat.) superam (5-6 mm long. = 2,5-2,8 mm lat.) aequante v. subsuperante, flosculis late obovatis e latere compressis, faciebus tamen convexis superne subtruncatis (cum anthopodio et arista 22-27 mm long. = cum anthopodio et corona 2,5-3 mm long. = 2 mm lat. = 1-5 mm crass.), glumella infera avellanea v.

castanea nitentiuscula coriacea (non ossea) glaberrima, tuberculis v. papillis omnino destituta v. vix nonnullis paucissimis circa coronam, eximie longitrorsum striata, dorso carinata, supera subaequilonga elliptica medio sulcato-2-carinata concolore; anthopodio brevissimo annulo-umboniformi apice truncato umbilicato, villis sericeis rufescentibus dimidiam glumellam aequantibus vestito.

Arista leniter excentrica subcrassiuscula persistens (20-55 mm long.) nuda scabriuscula (non pubescens) obsolete 2-geniculata, geniculo supero ad medium v. vix infra, infero ad quartum posticum sitis; articulatio glumellae cum arista imperspicua.

Corona majuscula sed latitudine glumellae parum angustior, acutiuscula saepeque undulata, a glumellae constrictione validiuscula etsi angustissima separata, pallescenti-subcinerascens, velutino-pulverulenta.

Species praecedenti, sed sequenti praecipue, affinis tute acuteque distinguenda.

Specimina inspecta sunt:

a) Ex *Bañado de Flores* prope *Buenos Aires*, Dec. 1880 (C. S.).

b) Ex pratis prope *Córdoba*, Dec. 1875 (G. Hieronymus), Dec. 1887 (C. S.), Jan. 1889 (T. Stuckert).

c) Ex rupestribus prope *Montevideo*, Febr. 1892 (C. S.).

9. **Oryzopsis stipoides** (Trin. & Rupr.) Speng.

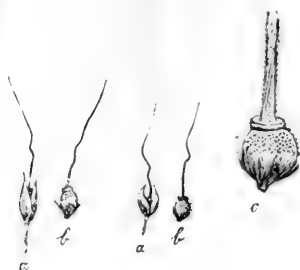
Urachne stipoides Trin. & Rupr., l. c., p. 25 (1849).

Piptochaetium stipoides Hack.-Arech., Las gram. urug., p. 268, n. 3 (1898)!

Stipa ovata OK. (non Trin. & Rupr.), l. c., p. 370 (1898).

Diag. Glumae ovatae flosculo duplo longiores, 5-nerves, vio-

lascentes; flosculus avellaneus v. castaneus obovatus compressus superne subtruncatus dorso v. non obsolete carinatus, glaber, dimidio supero grosse tuberculoso-papillosus; corona lata brevissima



9. *Oryzopsis stipoides* (Tr. & R.) Speg.

a. Spicula 1/1

b. Flosculi 1/1

c. Flosculi 4/1

pulvinato-applanata cinereo-pubescent; anthopodium brevissimum annuliformi-umbonatum truncatum, villis dimidia glumella brevioribus vestitum; arista persistens excentrica, 5-7-plo flosculo longior. Culmi folia filiformia laevia longe superantes, panícula relaxato-subdepauperata erecta, nuda v. obsolete vaginata.

Hab. Vulgata in pratis editioribus totius planitiei pamparum a *Bahía Blanca* usque ad *Tucumán*, per ann. 1880-1901.

Obs. Perennis sparsa caespitosula, caespitibus mediocribus v. subparvis (50-250 mm alt. = 50-150 mm diam.).

Culmi folia semper longe superantes graciles (100-500 mm alt. = 0,5-1 mm diam.) nudi v. apicem usque foliis paucis vaginati, minute longitrorsum striati glabri non scabri, nodis subincrassatulis fusco-testaceis.

Folia omnia isomorpha, herbacea viridia v. pallescentia; limbis complicato-filiformibus e latere compressulis (25-200 mm alt. = 0,5 mm diam. = 0,75-1 mm lat. apert.) extus non v. obsolete striatis glabris v. praecipue in juventute pilis longiusculis remotis patulis adpersis non scabris, intus subpulverulentis tenuissime 5-nervosis, apice breviter subulato-mucronatis acutis sed non pungentibus, vaginis adpressis pallidioribus non v. vix striatulis glaberrimis, ore non v. vix contractis non barbatis, auriculis cum

ligulis opacis scariosulis brevibus obtuse subovatis integris v. vix denticulatis continuis.

Inflorescentia anguste racemoso-subspicata (25-100 mm long.) primo erecta, dein relaxata secunda et patula, deorsum nuda v. saepe vagina folii supremi sat ampliata plus minusve vestita, rachi laevi, ramis scabriusculis, pedicellis (1-10 mm long.) scabris apicem versus non v. vix incrassatulis.

Spiculae primo erectae confertae dein nutantes atque relaxatae; glumis latissime ovatis antice abrupte acute longiusculeque acutato-subaristulatis, deorsum violaceis sursum hyalinis glaberrimis nitentiusculis, flosculo duplo longioribus, non v. obsolete carinatulis, 5-nerviis, infera (6-7 mm long. = 2,5-3,25 mm lat.) superam (5-6,5 mm long. = 2-2,5 mm lat.) aequante v. vix superante; flosculis late obovatis e latere compressis, faciebus tamen convexis, superne subtruncatis (cum anthopodio et arista 18-26 mm long. = cum anthopodio et corona 3-4 mm long. = 2-2,25 mm lat. = 1-1,50 mm crass.), glumella infera avellanea v. castanea opaca coriacea (sed non ossea) glabra, in tota parte dimidia supera laxe grosseque tuberculato-papillata, in infera laevis v. (sub lente valida) vix striatula, dorso carinatula, supera subaequilonga elliptica medio sulcato-2-carinata coriacella concolore; anthopodio brevi conoideo-subannuliformi apice truncato minuteque umbilicato, villis subsericeis primo albescentibus dein rufis dimidiam glumellam subaequantibus adpressis vestito.

Arista leniter excentrica (15-22 mm long.) subcrassiuscula persistens nuda scabriuscula basi leniter pubescens, obsolete 2-geniculata, geniculo supero paulo supra medium, infero ad tertium posticum situs; articulatio aristae cum glumella imperspicua.

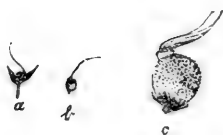
Corona majuscula crassiuscula pulviniformis a glumella con-

strictione angusta atque parum profunda separata, totamque ejusdem superficiem apicalem obtegens, cinerascens velutino-pulverulenta.

Specimina inspecta sunt:

- a/ Ex pratis prope *B. Aires* et *La Plata*, aest. 1880-1900 (C. S.).
- b/ Ex *Sierra del Tandil*, Mart. 1892 et Jan. 1901 (C. S.).
- c/ Ex *Sierra de la Ventana*, Nov. 1895 (C. S.).
- d/ Ex *Sierra de Curá-malal*, Dec. 1899 (C. S.).
- e/ Ex collinis prope *Montevideo* (J. Arechavaleta).

10. ***Oryzopsis tuberculata*** (Dsv.) Speg.



10. *Oryzopsis tuberculata* (Dsv.)
a. Spicula 1/1
b. Flosculus 1/1
c. Flosculus 7/1

Piptochaetium tuberculatum Dsv., Gay, Flor. Chil., v. VI, p. 272. (1853).

Stipa panicodes OK., l. c., p. 372 (1898)!

Diag. Glumae ovatae, flosculus sat superantes, 5-3-nerves, non v. \pm ve violascentes; flosculus ex avellaneo ater subsemi-lenticularis, dorso carinatus, totus dense grosseque papilloso-verrucosus; corona nulla v. vix umboniformis; anthopodium pusillum umboniforme truncatum breviter parceque pubescens; arista omnino excentrica caduca glabra flosculo 4-5-plo longior. Culmi folia filiformia subglabra et sublaevia aequantes v. \pm ve superantes, panícula contracto spicaeformis saepius vaginata.

Hab. Vulgatissima per totam ditionem Reipublicae Argentinae a *Río Colorado* usque ad *Chaco boreal*, per aest. 1800-1900.

Obs. Perennis caespitosula, caespitibus parvis v. pusillis (25-250 mm alt. = 25-100 mm diam.).

Culmi folia saepius superantes graciles (50-350 mm alt. = 0,5-0,75 mm crass.) nudi v. remote 1-2-foliati, foliis saepius ad vagi-

nas reductis, glabri, non v. obsoletissime longitrorsum striati non scabri, nodis incrassatulis glabris leniter rufescentibus, infimis saepius geniculatis.

Folia omnia isomorpha capillaria herbacea v. vix subrigidula viridia v. pallescentia, limbis in vivo canaliculato-subapplanatis (0,75-1 mm lat.) in sicco filiformi-convolutis (10-150 mm long. = 0,3-0,5 mm diam.), in prima juventute saepe pilis patulis longiusculis remotis adpersis, dein glaberrimis, laevibus v. vix scabriusculis, extus non striatis, intus tenuiter 1-3-nervulosis, apice breviter acuteque subulato-mucronatis non pungentibus, vaginis subrelaxatis pallidis glaberrimis laevibus, ore non contractis, auriculis non barbatis cum ligula brevi marginiformi v. subovata scariosula subhyalina integra v. denticulata continuis.

Inflorescentia anguste racemoso-spicata (10-120 mm long. = 4-8 mm diam.) nuda v. in forma nana vagina folii supremi \pm ve ampliata vestita, erecta, compacta v. plus minusve relaxata v. subinterrupta, rachi scaberula, ramis scabris a basi spiculigeris, pedicellis (0-5 mm long.) scabriusculis apice non v. vix subincrassatulis.

Spiculae saepius constipatae adpressae; glumis latissime ovatis breviter acuminato-aristulatis pallescentibus v. saepius deorsum plus minusve violascentibus glaberrimis carinatulis, flosculo dimidio et ultra longioribus, non nitentibus, infera (3-4 mm long. = 1,5-2,5 mm lat.) 5-nervi superam 3-nervem (2,75-3,75 mm long. = 1-2 mm lat.) parum superante; flosculis e dimidiato lenticularibus v. obovato-subglobosis, compressulis, faciebus sat convexis (cum anthopodio et arista 7-10 mm long. = cum anthopodio et corona 1,50-1,75 mm long. = 1-1,25 diam. antero-postico = 0,5-0,85 crass.), glumella infera primo pallescenti-rufescente dein atra v. nigra, coriacea dura, dorso valde gibba et plus minusve carinata, ventre subrecta tenuissime sulcato-caniculata

glaberrima ubique dense grosseque papilloso-verrucosa, superne rotundato-truncatula in angulo supero-ventrali umbonatula, inferne inaequilateraliter subcuneata, glumella supera subaequilonga obovata v. subobcordata mucronatula laevissima medio sulcato-2-carinata; anthopodio brevissimo conoideo-umboniformi apice truncatulo umbilicatoque minute adpresseque pubescente, pubescentia subalbescente.

Arista valde excentrica sublateralis subcrassiuscula tenuiter canaliculata facile decidua, nuda scabriuscula, non v. vix pubescens, obsolete flexuoso-subgeniculata (6-9 mm long.); articulatio aristae cum glumella non incrassata, parum perspicua.

Corona nulla, sed umbonulus subcylindraceus pusillus laevis glaber obtusus.

O. (Urachne) verruculosa (Ph., sub *Piptochactio*) etsi habitu et fere omnium partium fabrica eximie conveniens flosculorum praecipue forma, glumella tamen paululo majore et ejusdem papillis magis minutis et confertis recedere videtur.

Specimina inspecta sunt:

a/ Ex pratis prope *Bahia Blanca*, Febr. 1898 (C. S.).

b/ Ex pratis in *Sierra Ventana*, *Sierra Curá-malal*, *Sierra de Olavarria* et *Sierra del Tandil*, aest. 1895-1901 (C. S.).

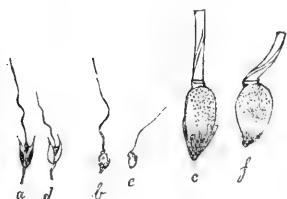
c/ Ex pratis prope *La Plata* et *B. Aires*, aest. 1880-1900 (C. S.).

d/ Ex campis prope *Córdoba*, aest. 1887-98 (C. S., T. Stuckert.)

e/ Ex pratis prope *Corrientes* et *Colonia Resistencia*, Chaco, aest. 1883-86 (C. S.).

f/ Ex pratis prope *Formosa* et *Asunción del Paraguay*, aest. 1881-83 (C. S.).

g/ Ex collinis prope *Montevideo*, aest. 1882-92 (C. S., J. Archavaleta).

11. *Oryzopsis uruguayensis* (Gris.) Speg.11. *Oryzopsis uruguayensis* (Gr.) Speg.

a. Spicula 1/1

b. Flosculus 1/1

c. Flosculus 6/1

Oryzopsis verrucosa (Ph.) Sp.

d. Spicula 1/1

e. Flosculus 1/1

f. Flosculus 6/1

Piptochaetium uruguayense Gris.,
Symb. ad Fl. arg., p. 297, n.
1896 (1879)!

Diag. Glumae ovato-lanceolatae,
flosculum sat superantes, 1-5-ner-
ves, violascentes; flosculus obova-
tus dorso non carinatus, in dimidio
supero dense minuteque papilloso-
asperulus; corona brevissima um-
boniformis acie puberula; anthopo-
dium pusillum umboniforme trunca-
tum, rufo-pubescent; arista sub-

persistens excentrica, flosculo 6-7-plo longior glabra. Culmi fo-
lia e convoluto planiuscula laevia saepius superantes, panícula
angusta contracta nuda.

Hab. In pratis sabulosis prope *Concepción del Uruguay*, Rep.
Argentina, Nov. 1875 (P. G. Lorentz, n. 471) et prope *Mocoretá*,
Brasilia meridionali, Febr. 1881 (C. S.).

Obs. Perennis caespitosa, caespitibus mediocribus (100-250 mm
alt. = 50-120 mm diam.).

Culmi folia saepius superantes graciles (150-350 mm alt. = 0,5
0,75 mm diam.) nudi v. remote 1-2-foliati, foliis saepius ad va-
ginas reductis, glabri, obsolete longitrorsum striati, non scar-
bri, nodis incrassatulis glabris leniter rufescentibus.

Folia omnia isomorpha, herbacea non v. vix subrigidula vire-
scentia, limbis angustis primo laxè convolutis dein applanatulis (100

-230 mm long. = 1,25-1,75 mm lat.) glaberrimis, non scabris, tenuiter striatis, nervo mediano etiam tenuissimo, intus subpulverulentis, 5-9-nervosulo-costulatis, apice breviter acuteque attenuatis acutis sed non pungentibus, vaginis pallidioribus glaberrimis laevibus, ore subcontractulis glabris, auriculis cum ligulis anguste marginiformibus subhyalinis subintegris glabris continuis.

Inflorescentia angusta contractula (50-100 mm long. = 5-7 mm lat.) nuda erecta primo conferta dein relaxato-subinterrupta, rachi scabriuscula, ramis scabris a basi fere spiculigeris, pedicellis (2-10 mm long.) scabriusculis apice vix lenissime incrassatulis.

Spiculae saepius constipatulae; glumis lanceolato-ovatis, sursum sensim cuneato-attenuatis sed non v. vix aristulatis, deorsum violascentibus sursum hyalinis glaberrimis nitentiusculis carinatis, flosculum vix tertio superantibus, infera 1-3-(saepius obsolete) nervi (4,5-5 mm long. = 2 mm lat.) superam 3-(v. obsolete 5-) nervem parum superante; flosculis inaequilateraliter obovato-clavulatis, e latere non v. obsolete compressis (cum anthopodio et arista 20-22 mm long. = cum anthopodio et corona 2,50-2,75 mm long. = 1,15 mm diam.), glumella infera primo pallescente dein rufescenti-ferruginea, coriacea dura, dorso gibba sed non carinata, ventre recta tenuiter sulcata glaberrima, ubique (basi ventrali excepta) dense minuteque papilloso-scabrida, superne obtuse rotundata e latere ventrali abrupte umbonato-subcoronulata, inferne breviter cuneata, glumella supera subaequilonga elliptico-sublanceolata mucronata laevissima, medio sulcato-2-carinata glabra; anthopodio brevissimo conoideo-umboniformi, apice truncato-umbilicato, villis rufescentibus adpressis tertium glumellae inferum obtegentibus vestito.

Arista valde excentrica sublateralis, subtenuiuscula, aegre decidua (18-20 mm long.) vix scabriuscula, obsolete 2-geniculata, geniculo supero paulo infra medium, infero ad quartum posticum

sitis; articulatio aristae cum glumella eximia, sed non incrassata et subimperspicua.

Corona umboniformis cylindracea brevissima laevis, margine obtusa pallescente tenuiter puberula.

Stipa? *tenella* Godr. etsi valde affinis, glumis flosculo 3-4-plove longioribus et glumella in parte suprema tantum exasperata recedere videtur.

Oryzopsis verrucosa (Ph.) Speg., etsi huic affinis, melius tamen ad *O. tuberculatam* (Dsv.) Speg. accedit.

12. *Oryzopsis panicoides* (Lam.) Speg.



12. *Oryzopsis panicoides*
(Lam.) Speg.

- a. Spicula 1/1
- b. Flosculus 1/1
- c. Flosculus 6/1

Stipa panicoides Lam., Ill. v. I, 158, n. 794 (1791).

Piptochaetium panicoides Dsv., Gay, Fl. chil., v. VI, p. 270 (1853).

Diag. Glumae ovatae flosculo subduplo longiores, 5-3-nerves, non v. violascentes; flosculus ex avellaneo ater subsemilenticularis dorso carinatus, laevissimus; corona nulla v. vix umboniformis; anthopodium pusillum umboniforme breviter parceque pubescens; arista decidua excentrica glabra v. subpubescens, 4-5-plo flosculo longior. Culmi folia filiformia sublaevia \pm ve superantes; panicula nuda v. vaginata contracta confertiuscula.

Hab. Rarius in sabulosis prope *Cabo corrientes*, Febr. 1889 (C. S.), nec non prope *Montevideo* (J. Arechavaleta).

Obs. Perennis caespitosula, caespitulis parvis v. pusillis (50-150 mm alt.=50-100 mm diam.).

Culmi folia semper longe superantes graciles (80-250 mm alt. = 0,5-0,75 mm diam.) nudi v. remote 1-2-foliati, foliis fere ad vaginas tantum reductis, glabri, obsoletissime longitrorsum striati, non scabri, nodis incrassatulis rufescentibusque.

Folia omnia isomorpha, capillaria, pallescentia herbacea v. vix subrigidula, limbis tenuissimis semper complicato-filiformibus (50-200 mm long. = 0,3-0,4 mm diam. = 0,5'-0,75 mm lat. apert.) teretibus v. subtrigonis rectiusculis v. subcircinatis semper glaberrimis laevibus v. obsolete subscabridis, intus tenuiter 1-3-nervulosis, apice attenuatis atque subulato-mucronatis non pungentibus, vaginis pallidis glaberrimis sublaevibus, ore non barbatis nec coarctatis, auriculis cum ligula (in radicalibus subevanida) breviter ovata, integra v. subbiloba glabra scariosula subhyalina continuis.

Inflorescentia angusta subracemosa — spicata (25-60 mm long. = 5-7 mm diam.) nuda erecta interrupta compactiuscula, rachi laevis, ramis non v. vix subscabridis brevissimis a basi dense paucispiculigeris, pedicellis (0-5 mm long.) scabridis apice non v. vix subincrassatulis.

Spiculae saepius constipatae adpressae; glumis ovatis breviter acuminato-aristulatis pallescentibus plus minusve violascentibus glaberrimis carinatis, flosculo subduplo longioribus non nitentibus, infera suborbiculari-ovata (3,5-4 mm long. = 2,25-2,50 mm lat.) sub-5-nervi, nervis lateratibus valde abbreviatis, superam ovato-lanceolatam 3-nervem (3-3,5 mm long. = 1,25-1,50 mm lat.) parum superante; flosculis subdimidiato-lenticularibus v. semiglobosis, compressis, faciebus sat convexis (cum anthopodio et arista 7-8 mm long. = cum anthopodio et corona 1,50-1,75 mm long. = 1-1,15 mm lat. = 0,5-0,8 mm crass.), glumella infera primo pallescenti-rufescente dein obscure atrocastanea glabra, tenuiter longitrosum striolata ad maturitatem ni-

tentiuscula coriacea dura dorso semidiscoideo - gibba et acute (subdiscolori) carinata, ventre recta atque tenuissime sulcato - canaliculata, superne arcuato - rotundata inferne subrotundato - cuneata, glumella supra subaequilonga obovata mucronatula medio sulcato 2 - carinata glabra; anthopodio brevissimo conoideo - umbonato apice truncato - umbilicato, minute adpresse pubescente, villis albescentibus v. rufescentibus brevibus paucis.

Arista vere lateralis subcrassiuscula tenuiter canaliculata, facile caduca (5-7 mm long.) nuda, vix scabriuscula v. deorsum tenuissime pubescens, obsolete flexuoso - subgeniculata; articulatio aristae cum glumella eximia sed non incrassata et parum perspicua.

Corona nulla sed umbonulus annuliformis pusillus umbilicatus, acie obtusus glaber v. pulverulento - pubescens.

Species *O. tuberculatae* (Dsv.) Speg., peraffinis atque similima et tantum post flosculi inspectionem dignoscenda.

13. ***Oryzopsis lejocarpa*** Speg., n. sp.

Piptochaetium panicoides Gris. (non E. Dsv.), Symb. ad Fl. Arg., p. 298, n. 1899 (1879)!

Diag. Glumae ovatae flosculo parum longiores, 5 - nerves violascentes; flosculus castaneus obovatus e latere compressulus non carinatus laevissimus nitidulus; corona nulla v. vix umboniformis; anthopodium umboniforme truncatum vix pubescens; arista excentrica flosculo 3-4-plo longior. Culmi folia filiformia subscabra longe superantes; panicula angusta contracta vaginata.



13. *Oryzopsis lejocarpa* Speg.

a. Spicula 1/1

b. Flosculus 1/1

c. Flosculus 6 l

Hab. In pratis montanis *Ciénega de Tucumán*, Jan. 1873 (Lorentz et Hieronymus, n. 608), nec non in *Pampa grande*, prov. *Salta*, Jan. 1897 (C. S.).

Obs. Perennis caespitosa, caespitulis mediocribus v. parvis (25-250 mm alt.=25-150 mm.).

Culmi fere semper folia longe superantes graciles (50-300 mm alt.=0,5-0,75 mm diam.) nudi v. remote 1-3-foliati, foliis saepius ad vaginas fere tantum reductis, glabri, obsolete longitrorsum striati non scabri, nodis vix incrassatulis, tenuiter annulatim constrictis fusciscentibus, non pubescentibus.

Folia omnia isomorpha fere capillaria e viridi subglauescentia herbacea v. vix subrigidula, limbis tenuibus semper complicato-filiformibus (15-150 mm long.=0,3-0,4 mm diam.=0,5-0,75 mm lat. apert.) compressis rectiusculis, semper glaberrimis obsolete scabriusculis, intus subcinerascentibus subpulverulentis tenuiter 3-5-nervulosis, apice attenuatis atque subulato-mucronatis non pungentibus, vaginis pallidis glaberrimis sublaevibus, non barbatis nec contractis, auriculis cum ligula (in radicalibus subevanida) breviter ovata integra v. subdenticulata subyalina continuis.

Inflorescentia anguste subracemoso-spicata (25-50 mm long.=3-4 mm diam.) nuda v. deorsum vagina folii supremi sat ampliata vestita, non v. vix subinterrupta depauperata erecta, rachi scabriuscula, ramis scabris brevissimis 2-5-spiculigeris, pedicellis (1-10 mm long.) erectis adpressis scaberrimis apice non incrassatis.

Spiculae subrelaxatae erectae, adpressae; glumis ovatis breviter acuminatis et vix aristulatis plus minusve violascentibus glaberrimis carinatulis, flosculo vix v. tertio tantum longioribus, non nitentibus, infera latissime ovata sub 5-nervia (3,5-4 mm long.=

2—2,25 mm lat.) superam ovato-lanceolatam (3—3,5 mm long.=1,30—1,60 mm lat.) parum superante; flosculis inaequilateraliter obovatis compressulis, faciebus sensim convexis (cum anthopodio et arista 6—10 mm long.=cum anthopodio et corona 2—2,50 mm long.=1—1,25 mm diam antero-postico, =0,5—1 mm crass.), glumella infera primo ochroleuca dein obscure castanea, ad maturitatem nitentiuscula, coriacea duriuscula, dorso semiellipsoideogibbosula non carinata, concolore, ventre subrecta acutiuscula atque tenuissime sulcato-canaliculata, glaberrima laevi sed longitrorsum dense tenuissimeque (sub lente valida tantum) striolata, superne truncato-rotundata, in angulo ventrali minute umbonata, inferne inaequilateraliter subrotundato-cuneata; glumella supera subaequilonga laevissima elliptica medio sulcato-2-carinatura; anthopodio brevi cylindraceo-umboniformi (0,20 mm long.) apice truncato minuteque umbilicato subglabro ad maturitatem pilis paucis albis v. subrufescentibus adperso.

Arista excentrica fere lateralis subcrassiuscula canaliculata, ad maturitatem facile decidua nuda v. vix deorsum pubescens, scabriuscula obsolete flexuoso-geniculata (3,5—7 mm long.); articulatio glumellae cum arista eximia sed non incrassata et parum perspicua.

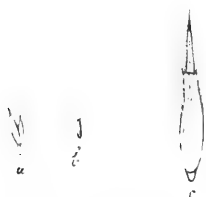
Corona nulla sed umbonulus brevissimus tenuiter annuliformis, basi leniter constrictulus, acie obtusiusculus glaberrimus.

STIPA Linn.

I. ANATHEROSTIPA Hack.

OK., Rev. gen. plant., III, 2.^a, p. 372 (1898).

Char. Glumae flosculo longiores; flosculus teres e lanceolato fusioideus; glumella infera margine altero externo alterum internum obtegente donata; glumella supera tenuiuscula, inferam subaequans, e cochleato planiuscula, non carinata nec sulcata; corona nulla; arista flosculo brevior persistens nuda.

1. *Stipa saltensis* OK. (Gris.).

1. *Stipa saltensis* OK.

a. Spicula $\frac{1}{2}$.

b. Flosculus $\frac{1}{2}$.

c. Flosculus ".

Piptochaetium mucronatum Grisb., Symb. Fl. arg. p. 296, n. 1893 (1879)!

Stipa saltensis OK., Rev. gen. plant., prt. III, 2.^a, p. 372 (1898)!

Stipa mucronata (Gris.) Speg. (non HBK.) in Kurtz, Col. ad Fl. arg., p. 46.

Diag. Glumae lanceolatae, flosculum cum arista superantes sub 1—3-nerves e hyalino subviolascens; flosculus subteres subfusioideus, dimidio infero glabro, dimidio supero laxe adpresseque pubescente, laevis, non v. vix fuscescens; corona nulla; anthopodium diametro flosculi subduplo brevius, umboniformi-subconoidium obtusiusculum, glabrum; arista mucroniformis crassiuscula rigidula scaberula flosculo 3-plo brevior. Culmi folia subsetacea subscabrida non v. vix superantes; paniculaparvula linearis pauperrima.

Hab. In alpinis *Nevado del Castillo*, prov. *Salta*, ann. 1873 (Lorentz & Hieronymus, n. 73).

Obs. Perennis dense caespitosa, caespitibus parvis v. submediocribus (50—250 mm alt.).

Culmi folia non v. vix superantes graciles (100—250 mm alt. = 0,5—0,7 mm crass.) teretes, glabri non v. vix subscabri, ad apicem usque vestiti, 2—3-nodi, nodis non incrassatis concoloribus, glabris.

Folia omnia isomorpha flavescentia, rigida, limbis tereti-convolutis capillaribus v. setaceis (20—150 mm long. = 0,3—0,6 mm diam.), extus glabris laevibus, saepius tenuissime pulverulento-scabris, intus (0,6—1 mm lat. aprt.) tenuiter 3-nervosis, obsolete pulverulentis, apice sensim breviterque attenuatis acutis subpungentibusque, vaginis inferis subrelaxatis, superis arcte adpressis pallidioribus nervoso-striatulis glabris, ore non contractis non barbatis nec pubescentibus, auriculis non v. vix evolutis cum ligulis (infimis subobsoletis) anguste ovatis v. lanceolatis (1—5 mm long.) inaequilateralibus subacutiusculis, integris v. denticulatis, e hyalino scariosulis continuis.

Inflorescentia subspicata (25—50 mm long.) 3—15-spiculigera angustissime linearis, non ramosa v. vix ima basi ramulis 2-geminatis (5—10 mm long.) 2—5-spiculigeris donata, rachi tenui compressula scabriuscula leniter flexuosa, pedicellis alternis, inferis, rarius mediis etiam, geminatis, altero brevior, altero longior, superis solitariis adpressis (1—4 mm long.) scabris subpurpurascentibus, ipso apice abrupte minuteque noduloso-subincrassatis.

Spiculae submonostichae aproximatae; glumis lanceolatis, postice fumoso-subviolascentibus, antice subhyalinis, deorsum brevissime abruptiusculeque angustatis, sursum subcuneato-atenuatis acutis sed non mucronatis, dorso rotundatis non carinatis laevibus glabris, infera tenuiter sub-3-nervis, nervis extimis

brevibus obsoletisque (6 mm long. = 1,50 mm lat.), inferam 3-nervem (5,75–6 mm long. = 1,25 mm lat.) non v. vix superante; flosculis subteretibus e lanceolato fusoideis (cum anthopodio et arista 4,75–5 mm long. = cum anthopodio sine arista 3,5–3,75 mm long. = sine anthopodio et arista 3,4–3,6 mm long. = 0,4–0,5 mm diam.) sursum longius attenuatis, glumella infera vix rigidula, per aetatem subfuscescente laevi, dimidia infera glabra, dimidia supera laxe breviter adpresseque pubescente, apice sensim in arista producta, non v. vix obsolete 2-denticulata; glumella infera superam subaequante submembranacea naviculato-planiuscula apice saepe pauci-pilosa, enervi; anthopodio brevissimo (0,15–0,20 mm long.) apice obtusiuscule rotundato obconico glaberrimo.

Arista pusilla (0,5–1 mm long.) persistens mucroniformis acuta rigidula nuda scaberula recta; articulatio aristae cum glumella non incrassata vix perspicua in latere ventrali quandoque (sed non semper) minute 2-auriculata.

Nomen Kuntzeanum prioritate gaudet ob *Stipam mucronatam* HBK., Nov. gen. 1, p. 125.

II. *PTILOSTIPA* *Specy.*

Char. Glumae flosculo longiores; flosculus teres e lanceolato fusoideus glaber v. pubescens, margine glumellae inferae altero externo alterum internum obtegente; glumella supera \pm ve evoluta plana, non v. obsolete nervosa; anthopodium validum acutum \pm ve villosum; corona nulla; arista flosculo pluries longior, tota v. saltem supra medium longiuscule villosa.

2. *Stipa plumosa* Trin. & Rupret.

Stipa plumosa Trin. & Rupr., l. c., I, p. 67 (1836). = E. Desv., Gay, Fl. chil. VI, p. 275 (1853) = Steudel, Syn. plant. glum., pt. I, p. 127 (1855). — OK, l. c., f. 372 (1898)!

Diag. Glumae lineari-lanceolatae parvae v. mediocres, flosculum subduplo superantes, 3-nerves, hyalinae; flosculus teres sublan-
ceolatus deorsum pubescens sursum glabratus; anthopodium diametrum flosculi non v. vix aequans, albo-villosum; corona nulla; arista flosculo 3-10-plo longior, ad tertium inferum geniculata infra ipsum torta glabrataque. Culmi ramosi, folia e convoluto plana laevia, panícula parva coarctata vaginata secunda.

Hab. Non rara in rupestribus dumetosis andinis a *Mendoza* usque ad *Jujui*, per ann. 1895-901 (C. S.).

Obs. Perennis subfruticulosa.

Culmi ramosi divaricati, subscandentes (500-1200 mm alt.) graciles (1-2 diam.) glabri, laeves; nodi recti v. plus minusve geniculati tumidi glabri.

Folia alterna remota, limbis (15-70 mm long. = 1,5-2 mm lat.) membranaceis rigidulis, acutis, non scabris, in sicco convolutis, basi coarctatulis, vaginis adpressis, ore truncatis auriculis villosis, ligulis glabris vix evolutis marginiformibus integris v. plus minusve dense ciliolato-fimbriatis.

2. *Stipa plumosa* Tr. & R.
a. Spicula $\frac{2}{3}$ f. media
b. Flosculus $\frac{1}{4}$ > >
c. Flosculus $\frac{1}{4}$ > >
d. Spicula $\frac{1}{2}$ > gracilis
e. Flosculus $\frac{1}{4}$ > >

Inflorescentia paniculato-subspicata angusta (50-300 mm long.) secunda, folio supremo plus minusve vaginata, ramis gracilibus glabris ad angulos non v. vix scabridis, pedicellis tenuibus (1-10 mm long.) sursum leniter incrassatulis vix scabriusculis.

Spiculae subconfertiusculae erectae; glumis hyalinis carinatis linear-lanceolatis superne longe attenuato-acuminatis 3-nervibus, nervis lateralibus brevibus, infera longiore (6-12 mm long.=1-1,5 mm lat.), supera brevior (5-11 mm long.=0,75-1 mm lat.), flosculum fere duplo superantibus; flosculis anguste lanceolatis (cum anthopodio et arista 15-70 mm long.=cum anthopodio sine arista 3-6 mm long.=sine anthopodio et arista 2,75-5,50 mm long.=0,3-0,5 mm diam.), glumella infera tenuis in parte dimidia postica plus minusve pubescente, in dimidia antica attenuata glabra v. subglabrata non v. vix asperula, glumella supera parvula (1-2,5 mm long.) obtusa, enervi, subpubescente, anthopodio terete gracili (0,25-0,50 mm long.) dense adpresse longiusculeque albo-villoso.

Arista tenuis plus minusve elongata (10-65 mm long.) in parte ima infera torta plus minusve subglabrata, ceterum breviter laxiusculeque villosa, pilis (1-2 mm long.) patulis tenuissimis albis, ad tertium infimum obsolete 2-geniculata; articulatio aristae cum glumella subimperspicua nervoso-annuliformis, pilis nonnullis saepe cincta.

Species praecipue spicularum magnitudine sat varians et formae saequentes distinguendae:

a) *micrura*: arista brevis, (10-12 mm long.), tenuis saepe apice subnuda; flosculus parvus non v. vix 3 mm long.. Vulgata in andinis prope *Mendoza* (*Higueras*, *Pampa Boques*, *Paramillo de Uspallata*, *Cuchuta*, *Punta de vacas*) Jan. 1895 et Fbr. 1901.

b) *media*: arista elongatula, (25-30 mm long.), subrigidula; flosculus mediocris 4-5 mm long.. Non rara in subandinis prov. S. Juan (*Cañada del humo*, *Sierra de Tonta!*), Mart. 1897.

c) gracilis: arista praelonga 35-65 mm long., tenuis mollis; flosculus 5-6 mm long.. Vulgata in rupestribus aridis subandinis prov. Salta (Santa Maria, Cafayate, Molinos, Cachi etc.), Jan. 1897.

3 *Stipa pogonathera* Dsv.

Stipa pogonathera Desv., Gay., Fl. chil. VI, p. 277 (1853).

Diag. Glumae lineari-lanceolatae majusculae, flosculum duplo superantes, 3-5-nerves, subvirescenti-hyalinae; flosculus fusoideus apice minute 2-auriculatus, totus laxe pubescens; anthopodium diametrum flosculi subduplo superans, albo-villosum; corona nulla; arista flosculo 8-plo longior, infra medium geniculata, tota villosa. Culmi simplices, folia setacea v. subjuncoidea laevia superantes, panícula majuscula coarctata vaginata secunda.

Hab. In aridissimis saxosis dumetosis secus *Rio Santa Cruz*, Pat. austr., sat rara, Jan. 1882 (C. S.) et 1897 (C. A.).

Obs. Perennis, dense fasciculato-caespitosa.

Culmi caespites plus minusve superantes (250-500 mm alt.) tenuiter adpressaeque sericeo-pubescentes, vaginati, nodis subconstrictis glabris pallidis.

Folia alterna dense fasciculata (100-250 mm alt.) erecta in prima aetate pubescenti-hirtella, dein plus minusve glabrata sordide lutescentia, limbis complicato-teretibus (50-150 mm long. = 1 mm



3. *Stipa pogonathera* Dsv.

a. Spicula $\frac{1}{2}$

b. Flosculus $\frac{1}{2}$

c. Flosculus $\frac{1}{2}$

diam.) glabris laevibus non nitentibus, juncoido-rigidis apice acutis pungentibusque, intus subeinerascentibus (apertis 1,5-2 mm lat.) pulverulento-puberulis, vaginis adpressis glabratis v. pulverulento-pubescentibus, ore vix contractis auriculatis, auriculis longe villosa-barbatis, atque dorso a limbis linea transversa villosa separatis, ligulis brevibus dorso et lateribus praecipue villosis.

Inflorescentia spicato-paniculata (100-250 mm long.) foliis superius plus minusve spathaceo-vaginata, ramis striatis glabris, pedicellis (3-7 mm long.) leniter sensimque clavulato-incrassatulis, villosis.

Spiculae subconfertiusculae erectae v. patulae; glumis hyalino-subvirescentibus carinatis, lineari-lanceolatis, superne longe attenuatis, infera 3-nervi (25,-26 mm long.=2,5 mm lat.), supera magis rigida 5-nervi, nervis 2 extimis \pm ve subobsoletis, (21-22 mm long.=1,5 mm lat.); flosculi fusoides (cum anthopodio et arista 90-95 mm long.=cum anthopodio sine arista 10 mm long.=sine anthopodio et arista 8 mm long.=1-1,10 mm diam.), glumella infera coriacea, ad maturitatem avellanea, ubique laxè adpresseque pubescente, utrimque breviter leniterque attenuata, glumella supera parum brevior (6-7 mm long.) coriacea, non carinata fusca, non v. vix apice pubescente, nervis non perpicuis; anthopodio obconico robusto (1,80-2 mm long.) dense longiusculeque albo-villoso.

Arista elongata (80-85 mm long.) recta v. obsolete sub medio geniculata, tota, a basi, dense longiuscule villosa, villis (2-3 mm long.) albis; articulatio aristae cum glumella imperspicua, auriculis ventralibus glumellae 2 pusillis linearibus hyalinis.

4. *Stipa Neaei* Nees.

Stipa Neaei Nees, Steudel, l. c., prt. I, p. 126, n. 33.

Stipa bella Phil., Sert. mend. II., An. Un. Chil. v. 34-36 p. 203 (1870)!

Stipa pulchella Mro, Ball, Journ. Linn. soc. XXI, p. 237 (1884).

Diag. Glumae lineari-lanceolatae submajusculae, flosculum subduplo superantes, 1-3-nerves, pulchre purpureae; flosculus sublanceolato-fusoideus, deorsum pubescens, sursum glabratus longeque attenuatus; anthopodium diametrum flosculi subduplo aequans, conoideum, in acumine glabrum ceterum albo-villosum; corona nulla; arista flosculum 6-12-plo longior, non geniculata, in quarto infero glabra, ceterum villosa. Culmi simplices folia subjuncoidea laevia superantes, panicula majuscula coarctata vaginata secunda.

Hab. In campis aridis saxosis inter dumeta vulgata, secus *Rio S. Cruz*, Jan. 1882-97, secus *Rio Chubut*, Febr. 1899, secus *Rio Negro*, Feb. 1898, nec non sparsim in andinis prov. *Mendoza*, aest. 1895-901 (C. S.).

Obs. Perennis, non v. vix fasciculato-caespitosa.

Culmi ima basi subdichotome brevissimeque ramosi fasciculati caespites plus minusve superantes (300-1200 mm alt.-1-2 mm



4. *Stipa Neaei* Nees

a. Spicula 1/1

b. Flosculus 1/1

c. Flosculus 4/1

diam.) erecti v. per arbusculas subscandentes, in prima juventute subpulverulento-pruinulosi dein glabrati, nodis glabris parum incrassatis non v. vix infuscatis.

Folia alterna (150-400 mm long.) conferta v. relaxata erecta, limbis complicato-teretibus (100-250 mm long. = 0,60-0,75 mm diam.), sub lente valida pruinulosis per aetatem glabratis laevibus juncoideis rigidulis apice acutis non v. vix auriculatis ibique puberulo-velutinis a limbis linea transversa prominente callosa v. puberula separatis, ligulis angustis marginiformibus, acie fimbriato-pilosulis, dorso pubescentibus.

Inflorescentia spicato-paniculata (150-350 mm long.) secunda, vaginis supremis plus minusve spathaceo-inflatis vestita, ramis geminatis v. bigeminatis angulosis glabris, pedicellis (2-10 mm long.) gracillimis superne leniter sensimque incrassatulis atque longe villosulis.

Spiculae confertae primo erectae dein patentes; glumis deorsum violascentibus sursum hyalinis leniter carinatis, lineari-lanceolatis apice longe attenuatis, infera 1-nervi (18-25 mm long. = 1-1,5 mm lat.), additis nervis 2 rudimentariis, supera 3-nervi (15-20 mm long. = 0,75-1 mm lat.), flosculis lanceolato-fusoides (cum anthopodio et arista 75-135 mm long. = cum anthopodio sine arista 10-11 mm long. = sine anthopodio et arista 8-9,5 mm long. = 0,60-0,75 mm diam.), glumella infera tenui pallida dimidia basali parcissime adpresseque pubescente, dimidia apicali sensim longaque attenuata glabra laevi, glumella supera dimidio fere brevior subhyalina glabra v. apice pilis nonnullis ornata; anthopodio subconoideo validiusculo (1-1,5 mm long.) in acumine glabro, ceterum adpresse albo-villoso.

Arista elongata (65-122 mm long.) recta, in quarto infimo glabra et torta, ceterum molliter longiusculeque villosa, pilis 2,5-4

mm long.) tenuissimis albis vestita; articulatio aristae cum glumella vix nervoso-nodulosa non incrassata glabra parum perspicua.

III. PAPPOSTIPA *Speg.*

Char. Glumae flosculo longiores; flosculus teres e lanceolato fusoides glaber v. pubescens, margine glumellae inferae altero externo alterum internum obtegente, glumella supera \pm ve evoluta plana non v. obsolete nervosa; anthopodium validum acutum \pm villosum; corona nulla; arista flosculo pluries longior \pm infra medium geniculata, sub geniculo longe papposo-villosa, supra geniculum glabra non v. vix scabrida.

5. *Stipa Ibari* Phil.

Stipa Ibari Phil., Plant. n. chil., An. Univ. chil., v. XCIV p. 717 (1896!).



5. *Stipa Ibari* Ph.
a. Spicula 1 1
b. Flosculus 1 1
c. Flosculus 3 1

Diag. Glumae lanceolatae submajusculae, flosculum duplo superantes, pappum geniculumque aristae aequantes 1-3-nerves, purpurascens; flosculus subfusoides totus pubescens, apice vix attenuatus minuteque 2-auriculatus; anthopodium diametrum flosculi subduplo superans, albo-villosum; corona nulla; arista flosculo 4-plo longior, infra medium geniculata, sub geniculo a

basi villosa-papposa, supra nuda. Culmi simplices folia convoluta hirtella superantes, panicula contracta parvula vaginata.

Hab. Rara in aridis Patagon. austr. prope *Lago argentino*, Febr. 1895 (C. Ameghino) et Jan. 1900 (F. Silvestri).

Obs. Perennis, fasciculata-caespitosa.

Culmi erecti (100-200 mm long.) folia plus minusve superantes, pubescenti-velutini, nodis coarctatulis retrorsum pubescentibus.

Folia fasciculata (50-100 mm alt.) conferta, obsolete subdisticha, limbis (20-50 mm long.) tereti-convolutis (0, 50-75 mm diam.) virescentibus, longitrorsum striato-sulcatis, patentim hispidulis apice acutiusculis, non pungentibus, vaginis plus minusve adpressis, glabris, ore truncatis, auriculis villosulis, a limbis linea prominula transversa callosa glabra limitatis, ligulis marginiformibus vix perspicuis ciliolatis.

Inflorescentia spicato-contracta (22-50 mm long.) paucispicigera folii supremi vagina spathaceo-inflata vestita, ramis angulosis pubescenti-villosulis, pedicellis angulosis (3-10 mm long.) apicem versus sensim lenissimeque incrassatis villosulis.

Spiculae confertiusculae erectae; glumis purpurascensibus, ima basi virescentibus apiceque elongato-hyalinis, glabris, anguste lanceolatis carinatis, infera 1-nervi, additis nervis 2 alteris rudimentariis, (18 mm long.=2 mm lat.), superam 3-nervem (18 mm long.=2-15 mm lat.) aequante; flosculis cylindraceo-subfusoides (cum anthopodio et arista 33-35 mm long. = cum anthopodio sine arista 6,5-7 mm long.=sine anthopodio et arista 5-5,5 mm long.=0,75 mm diam.), glumella infera coriacea tota sericeo-pubescente, utrimque leniter breviusculeque attenuata, supera subaequilonga non carinata tenuis parce pilosula, anthopodio crassiusculo (1,5 mm long.) toto sericeo-villoso.

Arista rigidula subcrassiuscula (25-28 mm long.) infra medium geniculata, parte suprema recta nuda rubescente vix scabrida, ceteram inferam a basi longe papposo-villosam, flosculo addito, aequante; villis tenuibus (5-7 mm long.) albis; articulatio glumellae cum arista vix annulo-nerviformis parum manifesta e latere ventrali auriculis duobus pusillis hyalinis ornata.

6. *Stipa chrysophylla* Desv.6. *Stipa chrysophylla* Desv.

a. Spicula 1 1

b. Flosculus 1 1

c. Flosculus 4 1

Stipa chrysophylla Desv., Gay, Fl. chil. VI, p. 278, tab. 76, ad. 2.

Stipa humilis var. *chrysophylla* OK., l. c., p. 371.

Diag. Glumae lanceolatae submajusculae, flosculo duplo longiores, pappum geniculumque aristae aequantes, pallidae v. purpurascentes; flosculus subcylindraceus totus pubescens, apice vix attenuatus minuteque 2-auriculatus; anthopodium diameter flosculi 2-3-plo superans, e glabrato villosum; corona nulla; arista flosculo 2-4-plo longior, ad medium v. ad tertium

posticum geniculata, infra geniculum tota villosa-papposa, supra nuda. Culmi simplices folia glabra laevia setacea superantes, panicula subparvula contracta.

Hab. Non rara in rupestribus andinis a *Neuquen* usque ad *Puna de Atacama*, per ann. 1895-1901 (C. S.).

Obs. Perennis, fasciculato-caespitosa.

Culmi non v. plus minusve caespites superantes (150-500 mm alt.) glaberrimi v. obsoletissime pubescentes v. pulverulenti, nudi v. vaginati, nodis vix tumidis saepe fusciscentibus glabris.

Folia fasciculata (100-200 mm alt.) conferta alterna; limbis complicato-teretibus (50-100 mm long.=0,5-0,75 mm diam.) glabris laevibus, in juventute virentibus, per aetatem flavis v. plus minusve aurantiis et nitidis, rigidis apice acuminatis pungen-

tibusque, vaginis adpressis pallidioribus glabris ore truncato-rotundatis, auriculis non v. vix evolutis saepius pubescentibus v. barbatulis, ligulis angustissime marginiformibus membranaceis, acie fimbriatulo-pubescentibus.

Inflorescentia paniculato-subspiciformis (40-80 mm long.) contracta, vagina folii supremi spathaceo-inflata vestita, ramis erectis angulosis scaberulis, pedicellis subtrigonis (3-10 mm long.) superne vix clavulatis pubescentibusque.

Spiculae constipatae erectae; glumis quandoque virescenti-subhyalinis, quandoque obscure purpurascentibus, dorso inferne viridibus margine superne hyalinis, carinatulis, anguste lanceolatis, longe attenuato-acuminatis, 3-nerviis, infera (16-18 mm long. = 1,5 mm lat.) superam (15-17 mm long. = 1-1,25 mm lat.) parum superante; flosculis cylindraceis (cum anthopodio et arista 20-45 mm long. = cum anthopodio sine arista 7-8 mm long. = sine anthopodio et arista 5,5-6,5 mm long. = 0,5-0,75 mm diam.), glumella infera rigidula alba v. purpurascente tota dense longiusculeque sericeo-pubescente utrimque non v. vix subattenuata, superpa paululo breviora tenui angusta, dorso saepius villosula enervi, anthopodio subcylindraceo (1,5 mm long.) glabrato v. plus minusve dense albo-sericeo-villoso.

Arista rigidula (12-30 mm long.) circiter ad medium geniculata, a basi ad geniculum longe papposo-villosa, villis tenuibus (3-6 mm long.) albis; articulatio aristae cum glumella non v. peraeque perspicua, e latere ventrali auriculis 2 erectis hyalinis angustis acutis ligulata.

Species sat variabilis et varietates sequentes distinguendae:

a) *minor* Dsv.: foliis (150-250 mm alt.) culmos et inflorescentias superantibus, glumis tricoloribus, aristae parte nuda purpurea ceteram inferam sub genu papposo-villosam non aequante; anthopodio

fere toto glabro. Vulgata in montanis et alpinis *Puna de Atacama* et prov. *Salta*, aest. 1897 et 1900.

b) major Dsv.: culmis (200-500 mm alt.) folia longe superantibus, glumis virescentibus v. obsolete purpurascentibus, aristae parte nuda saepius pallida inferam sub genu papposo-villosam fere duplo superante; anthopodio toto villosa v. in acumine tantum glabrato. Non rara in vallibus montanis in *Paramillo de Uspallata*, *Punta de vacas*, *Puente del Inca* et *Neuquen*, aest. 1895-1901.

7. *Stipa chubutensis* Speg., n. sp.



7. *Stipa chubutensis* Speg.

a. Spicula $\frac{1}{2}$

b. Florescentia $\frac{1}{2}$

c. Florescentia $\frac{1}{2}$

Diag. Glumae pappum et genu aristae valde superantes; flosculus subfuscoideus, apice minute 2-auriculatus, totus dense sericeo-villosus; anthopodium diametrum flosculi duplo et ultra superans, dense albo-villosum; corona nulla; arista flosculo 7-plo longior, infra quantum posticum geniculata, parte sub geniculo dimidia infima longe papposo-villosa, dimidia supra glabrata. Culmus simplex 2-3-nodus, nodis semper nudis glabris eximie atro-purpureo-annulatis; panicula contracta vaginis duobus supremis spathaceis semper arcte involuta; folia tereti-convoluta breviter rigida glabra acuta.

Hab. In graminosis rupestribus *Teka-choique*, Chubut, Febr. 1900 (O. Mauri).

Obs. Perennis fasciculato-caespitosa, caespitibus brevibus (100-200 mm alt. et diam.) relaxatis, rigidis.

Culm. folia semper superantes (200-350 mm alt.), plures ex eodem caespite, pallide virescentes obsolete striati, scaberuli, glabri, ad apicem usque foliati, sed ob vaginas foliorum abbreviatas,

interrupte pro parte nudi, saepius 3-nodi, nodis 2 mediis leniter geniculatis, non v. vix tumidulis, glabris eximie annulatim atropurpureis.

Folia e pallide virescente subglauescentia, subfasciculata, laxa, alterna; limbis convuluto-subulatis (30-80 mm long.=0,25-0,75 mm diam.) glabris, obsolete striatis, non scabris, nec nitidis, plus minusve arcuato-incurvis, rigidulis, apice attenuato-acutissimis sed non pungentibus, vaginis mediis et inferis angustis adpressis, internodiis dimidio brevioribus, infimis saepius pallide violascentibus, ubique glabris v. ad marginem externum minute pectinato-ciliolatis, ore rotundatis, auriculis obtusissimis velutino-villosulis, linea transversa annulari breviter patentimque villosula a limbis separatis, ligulis brevissimis integris saepius ad lineam piloso-velutinam reductis ornatis, duobus, supremis aproximatis abrupte spathaceo-inflatis, limbo plus minusve abbreviato donatis, glaucescenti-virescentibus v. obsolete violaceo-tinctis.

Inflorescentia paniculato-spiciformis (50-100 mm long.=5-7 mm diam.) vaginis duobus supremis arcte adpressis vestita, multispiculigera, rachi ramis nec non pedicellis (5-10 mm long.) lenissime sensimque incrassatis, obsolete angulatis, non scabris sed molliter plus minusve pubescenti-puberulis.

Spiculae constipatae, erectae; glumis hyalinis v. plus minusve purpurascentibus, flosculum triplo, genu et pappum longiuscule superantibus, anguste lineari-lanceolatis, sursum longe tenuiterque attenuatis, non v. vix carinatis, infera 1-nervia (nervis 1 v. 2 utrimque basalibus obsoletis tenuissimis brevissimisque saepe additis) (23-25 mm long.=2,3 mm lat.), superam eximie 3-nervem, basi saepe nervo altero tenui brevissimo utrimque addito (23-24 mm long.=2 mm lat.) aequante v. superante; flosculis cylindraceo-subfusoides (cum anthopodio et arista 30-60 mm long.=cum anthopodio sine arista 7-8 mm long.=sine anthopodio et arista 5,5-6

mm long.=0,60 mm diam.), glumella infera subhyalina tota dense adpresse longiusculeque albo-pubescente, utrimque breviter atque leniter attenuata, anthopodio subconoideo (1,75-2 mm long) =0,25 mm diam.) rigidulo dense sericeo-villoso (extremo apice, glabro excepto) suffulta, superne sine coarctatione in arista producta, minute subobtusiusculeque 2-auriculata, inferam fere aequilongam (5-5,5 mm long.) pubescentem apice, praecipue, nerviam obvolvete

Arista rigidula (40-53 mm long.) tenuis vix scaberula, in dimidio supero violascente, in infero albida, ad quartum infimum leniter geniculata, sub genu parte dimidia supera nuda glabra, dimidia infima longe papposo-villosa, villis tenuibus (5-7 mm long.) candidis; articulatio eximia nervoso-annuliformi, sed pilis fere semper occulta, non incrassata, basi auriculis parvulis triangularibus (0,15 mm long. et lat.) ligulata. Corona plane nulla.

Species *S. vaginatae* Ph. peraffinis, a qua tamen nodis culmorum semper nudis conspicue nigro-annulatis, ligulis superis vix evolutis integris et magnitudine spicularum partium satis riteque distincta videtur.

8. *Stipa humilis* Vahl

Stipa humilis Cav., Icon. V, t. 466, ad. 1. (1800).

Stipa humilis Vahl, OK., l. c., p. 371. (1799).

Diag. Glumae lineari-lanceolatae majusculae, flosculo duplo longiores pappo geniculatoque aristae conspicue breviores e virescente hyalinae; flosculus fusoidens totus pubescens utrimque attenuatus, apice non auriculatus; anthopodium diametrum flosculi duplo superans, e glabrato villosum; corona nulla; arista flosculo 5-8-plo longior, ad tertium po-



9. *Stipa humilis* Vahl.

a. Spicula $\frac{1}{2}$

b. Flosculus $\frac{3}{4}$

c. Flosculus $\frac{1}{2}$

sticum geniculata, infra geniculum basi nuda dein sensim villosopapposa, supra glabra. Culmi simplices folia setacea v. subjuncoidea glabra sublaevia non v. vix superantes, panicula contracta subparva vaginata.

Hab. Vulgata in aridis saxosis v. sabulosis ubique per *Patagoniam* (*Rio Gallego, Río S. Cruz, Puerto Descado, Golfo de S. Jorge, Chubut et Río Negro*) per ann. 1880-99.

Obs. Perennis, fasciculato-caespitosa.

Culmi folia aequantes v. parum superantes (100-300 mm alt.) glabri, saepius vaginati, nodis non v. vix tumidulis infuscatisque glabris.

Folia fasciculata (100-300 mm alt.) conferta alterna; limbis complicato-teretibus (50-200 mm long.=0,3-0,6 mm diam.) non v. vix scaberulis glabris rigidis, apice acuminatis pungentibusque vaginis adpressis pallidioribus, ore oblique truncatis, auriculis pubescentibus v. villosulis, cum limbo continuis v. linea callosa transversa vix perspicua limitatis, ligulis angustissimis vix marginiformibus, acie pubescenti-ciliolatis.

Inflorescentia panniculato-spiciformis (20-60 mm long.) contracta, vagina folii supremi spathaceo-inflata vestita, ramis erectis angulosis scaberulis, pedicellis subtrigonis (2-12 mm long.) sursum leniter incrassatulis, scabrido-pubescentibus.

Spiculae constipatae erectae; glumis hyalinis, leniter virescentibus, anguste lineari-lanceolatis, carinatulis, infera 1-nervi (18-22 mm long.=1-1,25 mm lat.) superam (17-21 mm long.=1,25 mm lat.) 3-nervem parum superante; flosculis fusoideis (cum anthopodio et arista 45-65 mm long.=cum anthopodio sine arista 8 mm long.=sine anthopodio et arista 6,5 mm long.=0,6-0,7

mm diam.), glumella infera rigidula primo alba dein fuscescente, tota laxè breviter adpresseque pubescente, utrinque sensim attenuata, supera dimidio breviorè enervia glabra; anthopodio subconoidèo (1,5 mm long.) rigido, in parte acuminata glabro, ceterum villosò.

Arista rigidula (40-69 mm long.) sat tenuis, ad tertium inferum geniculata, parte supera nuda recta vix fuscescente scabriuscula, parte sub genu in quarto infimo nuda v. subnuda, ceterum sensim longe papposo-villosa, villis tenuibus (5-8 mm long.) candidis; articulatio aristae cum glumella sat perspicua noduliformis nuda.

Formae duae sequentes forsàn distinguendae:

a) minor Speg.: caespitibus parvis (50-100 mm alt.); culmis folia subduplo superantibus (80-140 mm alt.); panicula parvula vix 5-8-spiculigera.

b) major Speg.: caespitibus majusculis (200-300 mm alt.); culmis folia vix v. non superantibus (200-250 mm alt.); panicula robusta 20-25 spiculigera.

9. *Stipa patagonica* Speg.9. *Stipa patagonica* Speg.a. Spicula $\frac{1}{2}$ b. Flosculus $\frac{1}{2}$ c. Flosculus $\frac{2}{3}$

Stipa patagonica Speg., Plant. Pat. austr., p. 581, n. 383 (1897).

Diag. Glumae lineari-lanceolatae, majores, flosculo longe superantes, pappo geniculoque aristae valde tamen breviores, hyalinae v. violascentes; flosculus subfusioideus totus pubescens, apice anguste longiusculeque 2-auriculatus; anthopodium diametrum flosculi subduplo superans villosum; corona nulla; arista flosculo 4-5-plo longior, paulo infra medium geniculata, sub genu tota villosopapposa. Culmi simplices folia setacea v. subjuncoidea, vaginis in limite et margine dense ciliatis donata, saepius superantes, panícula contracta mediocris vaginata.

Hab. In altiplanitie aridissima saxosa secus *Río Gallego* et *Río S. Cruz*, per. ann. 1882 et 1897.

Obs. Perennis, fasciculato-caespitosa.

Culmi folia saepius superantes (300-500 mm alt.) glabri saepius vaginati, nodis parum tumidulis fusciscentibus glabris.

Folia fasciculata (200-350 mm alt.) conferta alterna; limbis complicato-teretibus (50-250 mm lon. = 0,50-0,75 mm diam.) glabris, sursum attenuato-mucronatis pungentibusque, intus pulverulento-pubescentibus, vaginis adpressis glabris sed margine externo patentim longe ciliato-villosis, linea transversa annulari

patentim villosa a limbis separatis, ligulis parvulis integris v. bilobis membranaceis dorso et acie velutino-pubescentibus.

Inflorescentia panniculato-spiciformis (30-50 mm long.) contracta, vagina folii supremi spathaceo-inflata vestita, ramis erectis angulosis pubescentibus, sursum sensim leniterque incrassatulis et villosulis.

Spiculae constipatae erectae; glumis hyalinis v. plus minusve purpurascentibus, flosculum longe superantibus sed genu et pappo conspicue brevioribus, lineari-lanceolatis, non v. vix carinatulis, infera sub 5-nervi, nervis lateralibus brevibus v. obsoletis (24-30 mm long. = 3 mm lat.) superam eximie 5-nervem (22-27 mm long. = 3 mm lat.) superante; flosculis cylindraceo-subfusoides (cum anthopodio et arista 55-65 mm long. = cum anthopodio sine arista 10-12 mm long. = sine anthopodio et arista 8-9,5 mm long. = 1-1,25 mm diam.), glumella infera subrigidula non v. vix fuscescens, tota dense breviter adpresseque albo-pubescente, utrimque breviter lenissimeque attenuata, supera subaequilonga enervi glabra; anthopodio subconoideo (2-2,5 mm long.) dense sericeo-villoso, acumine excepto.

Arista rigida (45-55 mm long.) pro ratione crassiuscula, parum infra medium geniculata, parte supera nuda recta subrosea scabrida, inferam, flosculo addito, a basi longe denseque papposo-villosam subaequante, villis tenuibus (5-9 mm long.) candidis; articulatio eximia sed pilis abscondita non incrassata, in parte ventrali auriculis 2 hyalinis longiusculis (0,40-0,70 mm long.) ornata.

A *Stipa speciosa* Trin. inflorescentia vaginata contracta, vaginisque villosis recedit; a *St. humili* Vahl fabrica flosculorum distinctissima.

10. *Stipa speciosa* Trin. & Rupret.

10. *Stipa speciosa* T. & R.
 a. Spicula $\frac{1}{2}$ f. mayor
 b. Flosculus $\frac{2}{3}$ „ „
 c. Spicula $\frac{1}{4}$ f. minor
 d. Flosculus $\frac{2}{3}$ „ „

Stipa speciosa Trin. & Rupr., Act. petrop., ser. VI, v. V, p. 45 (1842).

Stipa vaginata Phil., Linnæa XXXIII, p. 126, n. 1103 (1865).—Speg., Prim. Flor. Chubut., p. 627, n. 198 (1897).

Digg. Glumæ lineari-lanceolatae e majusculo maximæ, flosculus longe superantes pappo geniculoque aristæ tamen breviores 3-7-nerves, pallidæ; flosculus subfusoides totus pubescens, apice vix auriculatus; anthopodium diametrum flosculi duplo superans, villosus; arista flosculo 4-5-plo longior, ad tertium infimum geniculata, sub genu basi subnuda dein sensim papposo villosa. Culmi simplices folia setacea v. subjuncoidea, vaginis glabris v. subpruinulosis suffultis plus minusve superantes, panicula contracta mediocris v. majuscula vaginata.

Hab. In montanis andinis a Lago Nahuel-huapi ad Mendoza, per ann. 1895-1901.

Obs. Perennis, fasciculato-caespitosa.

Culmi folia plus minusve superantes (200-800 mm alt.) glabri vaginati, nodis parum tumidulis fuscescentibus glabris.

Folia fasciculata (100-650 mm alt.) conferta alterna; limbis complicato-teretibus (50-500 mm alt. · 0,5-1 mm diam.) gla-

bris, apice mucronato-acutissimis pungentibusque, intus pruinulosis, vaginis adpressis glabris v. deorsum pruinulosis, ore abrupte truncatis auriculis glabris v. subpubescentibus, ligulis parvulis membranaceis acie fimbriato-pubescentibus. Ad basin fasciculorum foliorum saepe adsunt praefolia brevina v. elongata (15—100 mm long.) longe retrorseque sericeo-villosa.

Inflorescentia spiciformis elongata angusta (50—100 mm long.) nuda v. vagina folii supremi plus minusve inflata subvaginata, ramulis angulosis scaberulis, pedicellis adpressis (0—10 mm long.) angulosis puberulo-scabridis, sursum vix incrassatulis.

Spiculae constipatae erectae; glumis hyalinis flosculum subduplo saepe superantibus sed genu et pappo aristae conspicue brevioribus, lineari-lanceolatis, carinatulis, infera 3-(sub 7-) nervi, nervo mediano bene evoluto caeteris tenuissimis v. subobsoletis (17—40 mm long. = 2—4 mm lat.), supera 3—5-nervi; flosculis cylindraceo-subfusoides (cum anthopodio et arista 30—80 mm long. = cum anthopodio sine arista 8—16 mm long. = sine anthopodio et arista 6,5—13 mm long. = 0,75—1,25 mm diam.), glumella infera subrigidula fuscescente laxa breviter et adpresse pilosa (in dimidio supero quandoque plus minusve glabrata) utrimque leniter attenuata; supera parum breviora nervi glabra; anthopodio tereticonoideo (1,5—3 mm long.) rigido dense albo-villoso, acumine glabrato excepto.

Arista rigidula (23—70 mm long.) pro ratione crassiuscula, ad tertium inferum geniculata, parte supera nuda recta rosea v. fuscicula scaberula, infera sub genu prope basin subnuda dein sensim longius villosa-papposa, villis tenuibus laxis (4—7 mm long.) candidis; articulatio aristae cum glumella eximia sed non incrassata annulatim piloso-ciliolata, in latere ventrali auriculis 2 minimis ornata.

Formae duae sequentes facile distinguendae:

a) minor Speg.: glumis mediocribus (17-22 mm long.); flosculis in parte supera plus minusve glabris (8-9 mm long.); arista basi nuda (23-36 mm long.). Culmis folia, basi praefoliis destituta vaginis omnino glabris donata, longe superantibus. Vulgata prope *Mendoza* (*Pampa Boques*, *Paramillo de Uspallata*, *Puente del Inca*) Jan. 1895 et Febr. 1901 (C. S.).

b) major Speg.: glumis maximis (30-40 mm long.); flosculis totis pubescentibus (14-16 mm long.); arista a basi villosa (50-70 mm long.). Culmis folia, basi praefoliis villosis praedita vaginis pulverulentis suffulta, non v. vix superantibus. Vulgata prope *Lago Nahuel-huapi* (E. Fernández), Jan. et in *Valle Trollope*, *Neuquen* (Otto Asp), Febr. 1900.

IV. *STEPHANOSTIPA* Speg.

Char. Glumae flosculo non v. \pm ve longiores; flosculus teres v. angulosus, glaber v. villosus, laevis v. asper, glumellae inferae margine altero externo alterum internum obtegente; glumella supera parva v. pusilla plana enervi; corona eximia bene evoluta a glumella basi constrictione \pm ve profunda perfecte limitata, spathacea, cylindracea, cupuliformis, callosa v. membranacea; anthopodium validum teres acutum diametrum flosculi saepius pluries superans, villosum.



11. *Stipa hyalina* Nees

- a. Spicula $\frac{1}{2}$
b. Flosculus $\frac{1}{2}$
c. Flosculus $\frac{1}{2}$

11. *Stipa hyalina* Nees

Stipa hyalina Nees, Agrost. bras., p. 378 (1829).

Diag. Glumae anguste lanceolatae, flosculum sat superantes, 1-3-nerves hyalinae; flosculus sublanceolatus tenuiter scabrido-papillosus; corona e cylindraceo turbinata pallida, eximie a glumella distincta, acie ciliolata; anthopodium diametrum flosculi aequans v. parum superans;

arista persistens tenuis flosculo 6-10-plo longior. Culmi elati graciles, folia planiuscula non v. vix scaberula superantes; panicula ampla relaxata nutans.

Hab. Frequens in campis editioribus per totam planitiem pamparum, a *Bahia Blanca* ad *Tucumán* usque, per ann. 1882-1900.

Obs. Perennis laxae subcaespitosa herbacea viridis.

Culmi in quoque caespite numerosi, folia saepius longe superantes (250-1200 mm alt.=1-2 mm crass.) laxae remoteque v. dense apicem usque foliati, late fistulosi erecti recti v. basi geniculati, ibique saepe subverticillatim ramosi radicanesque, glaberrimi laevissimi e virescenti subglaucescentes, nodis incrassatulis fusculis glabris.

Folia omnia isomorpha, radicalia caespitosa erecta, culmigena laxa patula, herbacea mollia v. vix subrigidula viridia non v. lenissime glaucescentia, limbis sub jove pluvio planis, in sicco canaliculatis v. plus minusve involutis (50-300 mm long.=2-5 mm lat.) sursum sensim angustatis apiceque subulato-callosis sed non pungentibus glabris v. vix obsolete scaberulis, utrimque tenuiter denseque longitrorsum striato-costulatis, vaginis pallidioribus, infimis relaxatis, culmigenis adpressis glabris sublaevibus, ore truncatis, auriculis glabris v. parcissime ciliolato-barbatis, ligulis anguste marginiformibus truncatis scariosis glabris, acie denticulato-erosis.

Inflorescentia primo erecta v. vix secunda angusta subspicata (100-250 mm long.=5-15 mm diam.), plus minusve arcte vagina folii supremi parum inflata inclusa, dein longe exerta exharata patens nutans, rachi vix angulosa laevi, ramis et pedicellis (1-10 mm long.) gracillimis anguloso-compressulis minute e scabrido pubescentibus, summo apice obsolete incrassatulis.

Spiculae primo erectae adpressae dein relaxatae nutantesque, glumis hyalinis flosculum tertio superantibus, lineari-lanceolatis, sursum longe tenuiterque attenuatis saepeque subaristulatis, leniter carinatis nitidulis, infera 1-nervi (7-8 mm long.=0,4-0,5 mm lat.) superam tenuiter 3-nervem (5-6 mm long.=0,5-0,75 mm lat.) sat superante; flosculis teretibus leniter e lanceolato fusoideis (cum anthopodio et arista 30-45 mm long.=cum anthopodio et corona 4 mm long.=sine anthopodio et corona 2,80-3 mm long.=0,4-0,5 mm diam.), glumella infera primo membranacea pallida dein coriacea non v. vix fuscescente glabra sed dense minutissimeque scabrido-papillosa, superne vix angustata; glumella supera pusillima fere inconspicua hyalina; anthopodio terete acuto parvulo (0,30-0,60 mm long.) dense adpresseque albo-villoso, villis per dorsum glumellae breviter decurrentibus.

Arista tenuis nuda persistens (25-40 mm long.) glabra scabriuscula, obsolete 2-geniculata, geniculo supero ad tertium posticum, infero ad sextum infimum sitis, parte suprema recta, reliquam, flosculo addito, longe superante; articulatio aristae cum glumella non perspicua.

Corona eximia albida cylindracea v. vix subturbinatula subvaginiformis (0,6-0,75 mm long.=0,25-0,35 mm diam.), ventre fissa, basi recta v. obliqua, apice subloblique truncata, acie pectinatim ciliolata.

Specimina inspecta sunt:

a/ Ex cultis circa *Bahia Blanca*, Apr. 1895 (C. S.).

b/ Ex campis prope *Olacarria*, Oct. 1896 (C. S.).

c/ Ex collinis *Sierra del Tandil*, Mart. 1892 et Jan. 1901 (C. S.).

d/ Ex pratis prope *La Plata* et *B. Aires*, aest. 1882-1901.
(C. S.).

e/ Ex pratis prope *Sunchales*, prov. *S. Fè*, Nov. 1896 (C. S.).

f/ Ex collinis prope *Córdoba*, Dec. 1887 (C. S.) et Jan. 1898
(T. Stuckert).

g/ Ex pratis prope *Montecideo* (J. Arechavaleta) et Jan. 1892 (C. S.).

12. *Stipa formicarum* Del.



12. *Stipa formicarum* Del.

a. Spicula $\frac{1}{4}$

b. Floretulus $\frac{1}{4}$

c. Floretulus $\frac{1}{4}$

Stipa formicarum Del., Ind. sem. hort. monsp., p. 27 (1840).—P. Asch. & P. Graebne, Syn. d. mitteleurop. fl., bd. II, p. 112 (1899).

Diag. Glumae anguste lanceolatae, flosculum sat superantes, 1-3-nerves, hyalinae; flosculus sublanceolatus obsolete scabridus glaber; corona majuscula subturbinatula ore obliqua dense ciliato-fimbriata; anthopodium diametro flosculi subduplo longius villosum; arista persistens, flosculo 6-8-plo longior. Culmi elati graciles folia planiuscula laevia sat superantes; panicula vaginata relaxata nutans.

Hab. Non rara in pratis prope *La Plata*, Dec. 1897, prope *Fortín Mercedes* ad ripas *Río Colorado*, Jan. 1898, nec non in *Sierra Curámalal*, Dec. 1899 (C. S.).

Obs. Perennis densiuscule caespitosa, caespitibus mediocribus (200-500 mm alt.=100-250 mm diam.).

Culmi folia aequantes v. superantes subgraciles (200-600 mm alt.=1-2 mm diam.) toti vestiti, late fistulosi erecti glabri non scabri laeves v. tenuissime longitrorsum striati, nodis calloso-incrassatulis annulato-fuscescentibus glabris.

Folia omnia isomorpha, herbaceo-rigidula v. subcoriacea pallide viridi-glauescentia, limbis in vivo aperto-planiusculis in sicco

plus minusve laxe subcompresso-convolutis (150-350 mm long. = 1-2,5 mm lat.) dorso non v. vix carinatis, extus intusque glaberrimis non scabris atque tenuiter 7-11-nervuloso-costulatis, sursum sensim longiusculeque attenuatis complicato-compressiusculis, apice calloso-acutiusculis sed non pungentibus, vaginis posticis subrelaxatis, superis adpressis pallidioribus obsolete striatulis, glabris non scabris, ore truncato-rotundatis, auriculis obtusis glabris v. plus minusve puberulo-barbatis, ligulis marginiformibus, radicalibus brevissimis, non v. leniter arcuatis (0,20-1,5 mm alt.) integris, hyalino-scarisculis glaberrimis.

Inflorescentia (100-150 mm long.) confertiuscula, primo erecta, vagina folii supremi sat inflata fere tota vestita, dein ad medium v. ultra exerta secunda relaxato-nutans, rachi compressula non v. vix scabrida, ramulis angulosis v. compressis gracilibus scaberulo-subpubescentibus, a basi v. infra medium pedicelligeris, pedicellis (1-8 mm long.) scaberulis apicem versus modice compresso-clavulatis.

Spiculae primo confertae adpressae dein patulae relaxatae; glumis carinatis glabris hyalinis anguste linearibus, deorsum non v. vix angustatis, sursum longe attenuato-aristulatis, infera 1-nervi, additis nervis 2 lateralibus tenuissimis saepeque obsoletis v. peraeagre perspicuis (prt. membr. 7-8 mm long. = 0,75-1 mm lat. = arist. 1,5-3 mm long.), superam tenuiter 3-nervem (prt. memb. 5-6,5 mm long. = 1-1,15 mm lat. = arist. 1,5-2 mm long.) superante; flosculis teretibus lenissime sublanceolato-fusoideis, aequilateralibus (cum anthopodio et arista 35-45 mm long. = cum anthopodio et corona 5-6 mm long. = sine anthopodio et corona 3 mm long. = 0,4-0,6 mm diam.) dorso carinatis, glumella infera e coriaccello submembranacea subflaccidula (praecipue ante anthesin) glabra minutissime subimperspicueque papilloso-asperula, pallida v. vix subfuscescente non nitente, utrimque breviter (superne longius) leniterque subattenuata, glumella supera pusilla lan-

ceolata acutiuscula (1-1,5 mm long. = 0,20 mm lat.) hyalina enervi glabra; anthopodio flosculi diametrum subduplo superante (0,75-1 mm long.) terete duriusculo acutissimo pallido, dense adpresseque albo-villoso, villis quartum v. tertium infimum glumellae obvolventibus ac per ejusdem dorso leniter excurrentibus.

Arista tota pallida tenuiuscula centralis persistens (30-40 mm long.) subrigidula nuda scabrida, leniter 2-geniculata, geniculo supero parum supra tertium posticum, infero ad sextum infimum sitis, infra genua torta et pubescens; articulatio aristae cum glumella corona abscondita.

Corona albida pro ratione majuscula teres v. obsoletissime sub-turbinatula (1-1,5 mm long. = 0,25-0,35 mm diam.) ventre canaliculato-fissa, dorso rotundata integra, apice obliqua atque irregulariter densiusculeque denticulato-fimbriata, basi vix coarctata sed a glumella eximie distincta.

Species pulchella *St. hyalinae* Nees peraffinis ac cum illa facile confusa.

13. *Stipa charruana* Arech.*Stipa charruana* Arech.a. Spiculæ $\frac{1}{4}$ b. Flosculus $\frac{1}{4}$ c. Flosculus $\frac{2}{4}$

Stipa charruana Arech., Las gram. urug., p. 259, ad. XXXIII (1894)!

Stipa longecylindrica OK., Rev. gen. plant., III, 2, p. 369, et 372 (1898)!

Diag. Glumae lineari-lanceolatae, flosculo duplo longiores, 3-nerves, hyalinae; flosculus subteres glaber sublaevis non nitens; corona maxima spathaceo-vaginiformis membranacea, acie obliqua ciliato-fimbriata, ventre fissa, flosculum cum anthopodio aequans; anthopodium gracile flosculi diametrum 3-plo superans; arista persistens flosculo 6-plo longior, infra tertium infimum geniculata. Culmi folia juncoidea laevia saepius longe superantes; panicula majuscula relaxato-patentiuscula nutans.

Hab. In campis editoribus prope Yerui, Prov. Entre Ríos, Mrt. 1896 (F. Jurado), nec non prope Monterideo (J. Arechavala, OK.).

Obs. Perennis dense caespitosa, caespitibus majusculis (250-600 mm alt. = 100-250 mm diam.).

Culmi folia aequantes v. superantes subgraciles (300-700 mm alt. = 1-2 mm crass.) toti vestiti, late fistulosi, erecti, glaberrimi non

scabri laeves v. vix tenuiter longitrorsum striati, nodis leniter incrassatis annulato-fuscescentibus glabris.

Folia subdimorpha, sed semper tamen juncoidea rigida coriacea e pallescenti viridia leniterque glaucescentia, limbis (200-500 mm long.) infimorum complicato-teretibus (0,75-1 mm diam.), superiorum complicato-compressis dorso non carinatis (apice excepto) rotundatis, ventre plus minusve late canaliculato-apertis (1,5-2 mm lat. aprt.) rarius subapplanatis, extus intusque glaberrimis non scabris, utrimque tenuiter 7-9-nervuloso-striatis, sursum sensim longeque attenuatis complicato-compressis apiceque calloso-acutiusculis sed non pungentibus, vaginis posticis relaxatis, superis adpressis, pallidioribus obsolete striatulis glabris non scabris, ore leniter coarctatis, auriculis nullis v. obtusis non v. vix obsoletissime barbatis, ligulis marginiformibus, radicalibus breviusculis (0,5-0,75 mm alt.) truncatis, culmigenis arcuatis v. subovatis (1-1,5 mm alt.) integris v. vix denticulatis, e hyalino scariosulis glaberrimis.

Inflorescentia (100-200 mm long.) e depauperato relaxata, primo erecta angusta vix secunda, dein nutans patentiuscula, semper vagina folii supremi sat inflata deorsum vestita, rachi terete laevi, superne saepe compressula ac leniter scabrida, ramulis gracillimis scabriusculis valde remotis saepius ternis v. geminatis supra medium partitis apicem versus tantum pauci-spiculigeris, pedicellis longiusculis (3-15 mm long.), sursum dilatatulo-compressis, scabris.

Spiculae primo adpressae erectiusculae dein remotae nutantes; glumis non v. vix subcarinulatis glabris, flosculo duplo longioribus, hyalinis, anguste lineari-sublanceolatis deorsum leniter angustatis, sursum longe attenuatis subaristulatis, tenuiter 3-nerviis, infera (prt. membr. 16-20 mm long.=2-2,5 mm lat.=arist. 2-3 mm long.) superam (prt. membr. 14-15 mm long.=1,5-2

mm lat. = arist. 2-3 mm long.) sat superante; flosculis teretibus vix lenissime clavulatis aequalateralibus (cum anthopodio et arista 70-90 mm long. = cum anthopodio et corona 10-13 mm long. = sine anthopodio et corona 3,5-4 mm long. = 0,6-0,8 mm diam.) dorso non carinatis, glumella infera e coriaccello submembranacea subflaccidula glabra, minutissime subimperspicueque papilloso-asperula, pallida v. vix fuscidula, non nitente, deorsum leniter sensimque conoideo-turbinata, superne cum corona continua, non v. vix tenuissime obsoleteque coarctatula; glumella supera angustissime lineari acuta (1-1,5 mm long. = 0,15 mm lat.) enervi hyalina glabra; anthopodio longiusculo terete (junctionem glumellae versus vix turbinatulo-incrassato) pallido rigido acuto (2-2,5 mm long. = 0,15-0,20 mm diam.) dense adpresseque albo-villosulo, villis vix quintum v. quartum infimum glumellae obtegentibus.

Arista tenuiuscula centralis persistens (60-80 mm long.) subrigidula nuda scabrida, obsolete 2-geniculata, geniculo supero ad tertium posticum, infero ad sextum basale sitis, infra genua torta pallida, supra genua recta saepius leniter purpurascens; articulatio aristae cum glumella eximia sed corona omnino abscondita.

Corona magna submembranacea spathaceo-vaginiformis (5-7 mm long. = 0,5-0,75 mm diam.) e tereti subconoidea albescens v. purpurascens glabra laevis, ventre basin usque fissi non v. plus minusve sulcato-aperta, dorso rotundata integra v. saepe ad medium usque incisa, apice subobliqua atque dense fimbriato-sphaecelata.

Species praedistincta pulcherrima vix *St. formicarum* Del. non-nihil accedens.

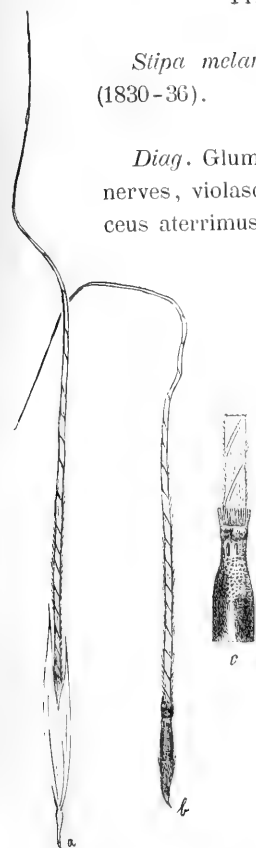
14. *Stipa melanosperma* Presl

Stipa melanosperma Presl, Rel. Haenk. I, p. 226. (1830-36).

Diag. Glumae lanceolatae, flosculo sat longiores, 3-5-nerves, violascentes; flosculus cylindraceus subcarbonaceus aterrimus glaber nitidissimus, vix in parte suprema minutissime papillosus; corona brevis turbinato-cupuliformis subconcolor, basi parum subplicato-constricta acie ciliolata; anthopodium diametrum flosculi 4-plo superans, dense ex albido rufo-villosum; arista persistens 10-plo flosculo longior, supra tertium supremum geniculata. Culmi folia setacea v. juncoidea sublaevia superantes; panícula valde depauperata laxissima nutans.

Hab. Non rara in pratis collinis prope *Peribebuy*, Paraguay, Aug. 1884, nec non abunde in vallibus *Sierra de Curámalal*, Dec. 1899 et in pratis *Rufino*, Prov. S. Fé, Nov. 1901 (C. S.).

Obs. Perennis vix caespitosa, caespitibus valde relaxatis (150-250 mm alt.=50-100 mm diam.).



Stipa melanosperma Presl

- a. Spicula $\frac{1}{2}$
b. Flosculus $\frac{1}{2}$
c. Corona $\frac{1}{2}$

Culmi folia fere semper longe superantes (250-750 mm alt.=0,75-2 mm diam.) teretes glaberrimi, non scabri, non striati, remote bi-tri-foliati, nodis non incrassatis atque vix fusciscentibus.

Folia subisomorpha, pallide viridi-subglauescentia, subcoriaceo-rigidula, limbis omnibus conformibus (v. infimis radicalibus in senectute applanato-apertis) laxe complicato-setaceis (50-200 mm long. = 0,5-1,25 mm diam. = 1-3 mm lat. aprt.) erectiusculis, incurvis v. subcircinatis, in prima juventute subflaccidis teretibus extus saepius sparse patule v. retrorse hispido-pilosulis, dein rigidis juncoideis, a latere compressulis glaberrimis non v. obsoletissime striatis, intus tenuiter 5-7-nervulosi non v. vix pulverulentis, apice breviter subulato-acuminatis non pungentibus, vaginis infimis relaxatis superis adpressis tenuiter striatulis glaberrimis, ore contracto-subtruncatis, auriculis plus minusve barbato-pilosis, cum ligulis (radicalibus obsoletis v. vix marginiformibus) ovatis obtusis glabris integris albescenti-subhyalinis continuis.

Inflorescentia parva (50-120 mm long.) primo erecta vagina folii supremi non v. vix ampliata vestita, dein longe exerta nuda secunda nutans, valde depauperata (5-15-spiculigera), rachi pubescenti-hispidula (saltem apicem versus), ramis remotis inferis geminatis bispiculigeris, superis solitariis 1-spiculigeris angulosis, cum pedicellis antice vix incrassatulis (5-15 mm long.) scabridis pubescentibusque.

Spiculae primo erectae dein nutantes; glumis lanceolatis, basin versus subvirescentibus, medio violaceis, sursum longe attenuatis aristulatisque hyalinis glabris, non v. parum nitentibus, flosculo dimidio et ultra longioribus, non v. obsolete carinatis, ad carinas non v. parce hispidulo-scabridis, infera 3-nervi (25-45 mm long. = 3,5-4,5 mm. lat.) superam 5-nervem (23-40 mm long. = 3-4 mm lat.) superante; flosculis cylindraceutis (cum anthopodio et arista 120-160 mm long. = cum anthopodio et corona 12-16 mm long. = sine anthopodio et corona 7-9 mm long. = 1-1,5 mm diam.), glumella infera primo pallida opaca, dein atro-sanguinea, postremo nigerrima, verniceo-nitentissima, coriaceo-subossea, laevissima (etiam sub lente validissima) utrimque breviter leniter-

que angustata, in parte supera angustiore leniter foveolato-subplicata atque dense minuteque papilloso-aspera (papillis atris v. albidis), coronula eximia ornata, ventre non sulcata, marginibus imbricatis; glumella supera pusilla hyalina aegre perspicua enervi obtusa; anthopodio gracili terete praelongo (4,5-6 mm long.) purpurascens acutissimo pungente, villis adpressis densissimis inferis albescentibus, superis ferrugineis sericeo-nitentibus, fere ad medium usque glumellam obtegentibus, vestito.

Arista crassiuscula rigidissima (110-150 mm long.) persistens, fuscescens, dense breviter adpressequ puberulo-velutina 2-geniculata, geniculo supero ad quartum supremum, infero ad tertium superum sitis, parte infera sub genu recta sed valide torta; articulatio nulla.

Corona brevis (0,30-0,45 mm long. = 1-1,10 mm diam.) turbinato-cupuliformis, albo-sericea (rarius atro-rubra), deorsum a glumella constrictione parum profunda obsolete limitata, margine acuta, minute denseque pectinatim ciliolato-pubescent, ciliis rubro-ferrugineis.

Species eximia pulcherrima ab incolis *Flechilla negra* vocata, pecudibus quammaxime obnoxia.

15. *Stipa Clarazi* Ball

Stipa Clarazi Ball, Cont. Fl. Nrt-Pat. and etc., p. 237 (1884).

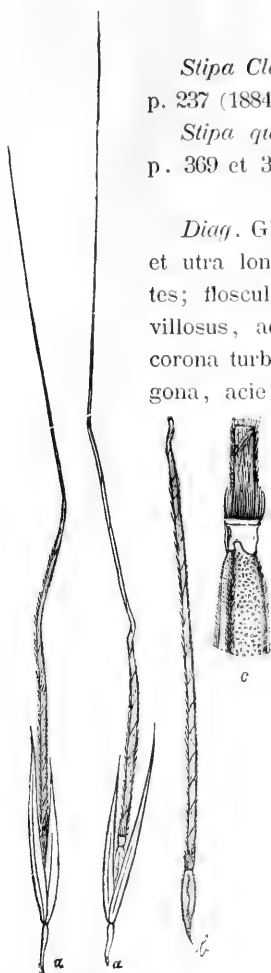
Stipa quadrifaria OK., Rev. gen. plant. III, 2, p. 369 et 372 (1898)!

Diag. Glumae lineari-lanceolatae, flosculo duplo et utra longiores, 3-nerves, e hyalino violascentes; flosculus cylindraceo-tetragonus, ad angulos villosus, ad latera glaber ruguloso-subpapillosum; corona turbinatulo-cylindracea non v. vix subtetragona, acie horizontalis ciliolata, basi constrictula atque ad latera eximie et semper sinuato-depressa; anthopodium 3-sub-4-plove diametrum flosculi superans, dense albo-villosum; arista persistens 9-11-plo flosculo longior, valde pubescens. Culmi folia ex applanato subconvoluta sublaevia longe superantes; panícula valde depauperata laxissima, patulo-nutans.

Hab. Vulgata per totam pamparum planitiem nec non in collinis et montuosis, aest., per ann. 1880-1900.

Obs. Perennis, laxissime subcaespitosa, caespitibus parvis v. medio-cribus (50-350 mm alt. et diam.).

Culmi folia semper longe superantes subgraciles (200-750 mm alt. = 1-



Stipa Clarazi Ball.

a. Spiculae $\frac{1}{2}$

b. Flosculus $\frac{1}{2}$

c. Corona $\frac{1}{2}$

1,5 mm diam.), ad medium et ultra vestiti, latiuscule fistulosi, erecti v. ima basi leniter geniculati, glaberrimi non scabri, laeves v. tenuiter longitrorsum striati, 2-3-nodi, nodis non v. vix incrassatis concoloribus v. rufescentibus glabris.

Folia omnia subisomorpha, semper tamen rigida subjuncoidea, pallide viridia, limbis rectis v. flexuosis circinatisve (30-300 mm long.), in juventute et in sicco convolutis (0,5-1 mm diam.) compressiusculis, per aetatem et udis, praecipue culmigenis, subapplanatis v. laxe convolutis (1-3 mm lat. aprt.), dorso non carinatis, non v. obsolete scaberulis, quandoque glaberrimis, quandoque sparse patule subretrorseque piloso-hirtulis, obsolete striatis, ventre scaberrimis nervoso-sulcatis, nervis 3-5 crassioribus, 2-6 tenuioribus adjectis, apice sensim attenuatis subulato-acutatis sed non pungentibus; vaginis infimis saepius relaxatis, caeteris adpressis pallidioribus non scabris, non v. nervoso-striatis, margine externo glabro v. saepius dense pectinato-ciliato, ore sensim coarctatulis, auriculis obtusis, concoloribus v. purpureo-maculatis, saepius dense barbato-villosis, cum ligula continuis, villis saepe per latera ligularum rarius per marginem foliorum excurrentibus, ligulis infimis brevibus marginiformibus, superis elongatis ovatis v. lanceolatis albescenti-hyalinis integris, laceris v. ciliato-barbatis.

Inflorescentia (50-250 mm long.) depauperata relaxata, primo erectiuscula postice vagina folii supremi non v. paulo ampliata plus minusve vestita, dein longiuscule exerta exharata patulonutans, rachi non v. vix scaberula, ramis geminatis remotis alternis tenuibus, apicem versus tantum 1-5-spiculigeris scabris, pedicellis subtrigonis elongatis (5-25 mm long.) scaberulis, apice sensim leniterque clavulatis.

Spiculae nutantes, majusculae remotae glaberrimae; glumis non v. vix subcarinatis, flosculo duplo v. triplo et ultra longioribus, albescenti-hyalinis v. plus minusve violascentibus, lineari-lanceo-

latis, deorsum leniter angustatis sursum longissime attenuatis sub-aristulatisque, 3-nervibus, saepius nervo utrimque tenui subobsoleto adjecto et tum sub-5-nervibus, infera (prt. mbr. 20-40 mm long.=2-2,75 mm lat.=arist. 4-7 mm long.), superam (prt. mbr. 18-25 mm long.=2-2,50 mm lat.=arist. 2-5 mm long.) sat superante; flosculis cylindraceo-tetragonis aequilateralibus (cum anthopodio et arista 80-180 mm long.=cum anthopodio et corona 8-15 mm long.=sine anthopodio et corona 5-8 mm long.=0,9-1 mm diam.); glumella infera coriacea semper pallida utrimque breviter leniterque angustata, ad angulos apicem usque adpresse densiusculeque albo-pilosa, faciebus glabris dense minuteque papilloso-asperis, superne a corona eximie limitata; glumella supera elliptica pusilla (1-1,5 mm long.=0,5 mm lat.) enervi glabra obtusiuscula; anthopodio longiusculo terete pallido duro acuto (2,5-5,5 mm long.=0,15-0,20 mm diam.) dense adpresseque albo-villoso, villis vix quantum v. quantum infimum glumellae obtegentibus.

Arista crassiuscula centralis persistens (70-165 mm long.) rigida, 2-geniculata, geniculo supero infra medium, infero inter tertium et quartum posticum sitis, parte recta suprema scaberula, non v. vix purpurascente, ceteram infra genua tortam atque dense adpresseque pubescentem, addito flosculo, superante; articulatio aristae cum glumella eximia sed corona cincta et non perspicua.

Corona cylindraceo-turbinatula, obsolete tetragona (0,75-1 mm long. et diam.) callosa laevis glaberrima, glumella pallidior et ab illa deorsum eximie limitata, basi subobliqua, utrimque ad latera minute se constanter perfecte sinuatulo-foveolata, in margine supero recta dense longiusculeque villosulo-ciliata.

Varietates duae distinctissimae adsunt sequentes:

- a) *typica* Speg. Culmis non bulbosis elatis v. elatiusculis (350-750 mm alt.), foliis elongatis latiusculis (100-350 mm long.) rectiusculis, paniculis nutantibus, spiculis flosculis aristisque majoribus. In regionibus calidioribus crescens.

b) bulbosa Speg. Culmis basi crasse vaginato-bulbosis, floribus radicalibus paucis (1-7) dense spicato-congestis, glumis lanceolatis plus minusve carinato-alatis, infera 5-7 mm long., supera 3-4 mm long., in carina pubescentibus, flosculis ovatis compressis (3 mm long.=2 mm lat.=1 mm crass.), glumella coriacea laevissima glaberrima subnitente apice umbonatula saepeque ciliatula inermi v. breviuscule mucronato-subaristulata donatis constitutis, paniculis erectis depauperatis minoribus. In temperatis v. frigidis occurrens.

Specimina inspecta sunt:

a/ Ex pratis (var. *a*) rupestribus ditionis *Montevideensis*, Dec. 1892 (C. S.) ac Jan. 1893 (J. Arechavaleta).

b/ Ex collinis (var. *a*) *Sierra del Tandil*, Febr. 1894 (C. S.).

c/ Ex pratis (var. *b*) prope *La Plata* et *B. Aires* aest. 1880-1900 (C. S.).

d/ Ex ripis *Rio Negro* et *Rio Colorado*, Jan. et Febr. 1898 (C. S.).

g/ Ex pratis circa *B. Blanca*, Apr. 1895, Febr. 1898 et Dec. 1899 (C. S.).

h/ Ex campis prope *Sierra de Curamalal* Dec. 1899 (C. S.).

i/ Ex campis prope *Colonia Ceres*, prov. S. Fé, Dec. 1891 (OK.).

l/ Ex pratis montanis in *Pampa grande*, prov. Salta, Jan. 1897 (C. S.).

m/ Ex pratis montanis *Cuesta de Tafi*, prov. Tucuman, Dec. 1888 (M. Lillo).

16. *Stipa manicata* Dsv.16. *Stipa manicata* Dsv.

- a. Spicula $\frac{1}{4}$ var. media.
 b. Flosculus $\frac{1}{4}$ » »
 c. Flosculus $\frac{1}{4}$ » »
 d. Spicula $\frac{1}{4}$ » latifolia.
 e. Flosculus $\frac{1}{4}$ » »
 f. Flosculus $\frac{1}{4}$ » »

Stipa manicata Dsv., Gay, Fl. chil., v. VI, p. 288 (1853).

Stipa latifolia Arech., Las gram. urug., p. 257, n. 3 (1894)!

Stipa latissimifolia OK., Rev. gen. plant. III, 2, p. 369 et 352 (1898)!

Diag. Glumae elliptico-lanceolatae, flosculo saepius subduplo longiores, 3-nerves, virescenti-hyalinae v. atro-violascentes; flosculus obsolete 4-5-gonus, ad angulos villosus, lateribus glabris obsolete ruguloso-papillosis; corona e cylindraceo subconoidea callosa, acie horizontalis ciliolata, basi non v. vix constricta sed a glumella bene distincta; anthopodium flosculi diametrum semper sed parum superans, albo-villosum; arista persistens 7-10-plo flosculo lon-

gior, paulo infra tertium superum et paulo infra medium geniculata \pm ve pubescens. Culmi folia applanata lata v. latissima scabrida longe superantes; panicula saepius ditissima relaxata nutans.

Hab. In pratis et rupestribus boreali-patagonicis, chilensibus, pampeanis nec non montevidensibus, aest. 1890-1901 (J. Arechavaleta, OK., C. S.).

Obs. Perennis non v. laxe caespitosa, caespitibus mediocribus v. majusculis (150-500 mm alt. et diam.).

Culmi sat numerosi folia semper longe superantes graciles v. robusti (200-1200 mm alt.=1-4 mm diam.) latiuscule fistulosi, basi non v. vix geniculati, glabri non scabri laeves v. obsolete longitrorsum striati ad medium v. ad apicem usque vestiti, 2-3-nodi, nodis incrassatulis rufescentibus glabris.

Folia omnia isomorpha, in juventute v. in sicco plus minusve convoluta, per aetatem et viva plana, limbis rectis erectisque v. patulonutantibus latiusculis v. latissimis (50-500 mm long.=3-12 mm lat.) rigidulo-herbaceis viridibus, quandoque glabris, quandoque pubescenti-hirtellis, margine saepe ciliolatis scabridis, longitrorsum dense nervuloso-costulatis (nervis 21-61), vaginis vix pallidioribus adpressis striatulis non scabris, totis glabris v. margine pectinato-ciliolatis, ore abrupte coarctatatis non v. plus minusve piloso-barbatis, ligulis (supremis ovatis exceptis) brevissime marginiformibus subfuscescentibus glabris denticulatis.

Inflorescentia paniculata quandoque depauperata (100-150 mm long.) quandoque ditissima (400-500 mm long.) in juventute vagina folii supremi satis ampliata tota v. pro parte vestita, dein plus minusve longe exerta patulo-nutans, rachi glabra v. vix scaberula, ramis 3-5-fasciculatis, inferis remotis, superis aproximatis, elongatis gracilibus (25-150 mm long.) subscaberulis, infra medium simplicibus et nudis, supra medium ramulosis et pedicelligeris, pedicellis tenuibus (1-15 mm long.) scabris, vix apice ipso lenissime incrassatulis.

Spiculae primo erectiusculae dein pendulo-nutantes, pallide virescentes v. saepius atro-purpurascens; glumis adpressis quandoque virescenti-hyalinis, quandoque plus minusve atro-purpurascens v. violascentibus, glaberrimis nitentiusculis, non v. leniter carinulatis, ad carinas laevibus v. subscabriusculis, flosculo dimidio v. subduplo longioribus, elliptico-lanceolatis superne longiuscule acutatis sed non aristulatis, infera 3-nervi, (9-12 mm long.

=1.25-2.50 mm lat.) superam 3-(5-) nervem (7-11 mm long.=1.10-2.30 mm lat.) parum superante; flosculis saepius e tereti tetrapentagonis, non v. leniter subclavulatis (cum anthopodio et arista 35-80 mm long.=cum anthopodio et corona 4-9 mm long.=sine anthopodio et corona 2.75-5.50 mm long.=0.65-1 mm diam.) sursum brevissime leniterque angustatis cum coronula continuis, deorsum longiuscule attenuatis, glumella coriacea pallescente, non v. rarius pallide violascente (quandoque ventre subgibbosa), ad angulos (et dorso saepe) ultra medium v. ad apicem usque adpresse breviusculeque albo-villosa, faciebus planis minutissime papilloso-asperulis; glumella supera pusillima elliptica obtusa (0.75-1 mm long.=0.25 mm lat.) nervi hyalina glabra; anthopodio terete tenui rigido pallescente (1-2.5 mm long.=0.14-0.18 mm diam.) dense adpresseque albo-villoso, villis vix quantum v. quantum intimum glumellae obtegentibus.

Arista centralis medioeris pallida v. purpurascente nuda scaberrima (30-75 mm long.) per aetatem tantum aegre subdecidua, 2-geniculata, geniculo supero parum infra tertium supremum, infero parum infra medium sitis, sub geniculis ad maturitatem valde torta ac pubescens; articulatio aristae cum glumella in apice centrali glumellae sita.

Corona brevis cylindracea v. obsoletissime subconoidea farcta callosa (0.25-0.40 mm alt.=0.50-0.60 mm diam.) cum glumella continua, coarctatione transversa nulla v. obsoletissima glabra, basi subobliqua, apice truncata recta vix marginata puberulo-hispidula, albida v. atro-purpurea.

Hujus speciei varietates sequentes distinguendae:

a) typica Speg.: culmis minoribus (150-400 mm alt.=1-2 mm diam.) foliis saepius laxe involutis atque glabris limbis (4-5 mm lat.) vaginisque saepius tamen margine ciliatis, viridibus v. obsolete glaucescentibus, firmulis, paniculis —ve amplis erectis v. secundis, glumis ehyalino virescentibus v. fumose purpurascentibus, flos-

culis tereti-subpentagonis clavulatis ventre non v. leniter gibbosulis non v. vix ad medium usque angulorum tantum villosulis (cum anth. et arista 35-50 mm long.=cum anth. et corona 2.75-6 mm long. 1 mm diam.), pallidis, corona subeonoidea a glumella parum distincta et cum illa fere continua. In Chile, Mendoza et S. Fé vulgata.

Specimina transandina prope Maullin a Cl. Philippi lecta et mihi missa, a cisandinis vix coronula paululo longiore et glumella supera 5-nervi recedere videntur.

b) media Spag.: culmis majusculis (350-900 mm alt.=1.5-3 mm diam.) foliis saepius planissimis latis (4-7 mm lat.) glabris v. hirtellis, obscure virescentibus, paniculis confertis nutantibus, glumis atro-purpurascensibus, flosculis mediocribus eximie tetragonis vix clavulatis (cum anth. et arista 50-60 mm long.=cum anth. et corona 3.5-4 mm long.=0.65-0.75 mm diam.) pallidis v. leniter violascentibus, corona saepius atro-purpurea. In montuosis Nahuel-huapi Sierra Curamalal, S. Ventana, S. Tandil.

c) latifolia (Arech.) Spag.: culmis elatis subarundinacei (800-1200 mm alt.=3-4 mm crass.) foliis planissimis latissimis (6-12 mm lat.) glabris v. hirtellis viridibus, paniculis ditissimis nutantibus, glumis pallide virescentibus v. vix violascentibus, flosculis majusculis subtetragonis non clavulatis (cum anthopodio et arista 50-65 mm long.=cum anthopodio et corona 6-9 mm long.=sine anthopodio et corona 4-4.50 mm long.=0.75-0.80 mm.) pallidis, corona albida. In collinis tandilensibus et uruguayensibus viget.

Specimina inspecta sunt:

a Ex pratis prope Maullin, Chile, Jan. 1873 (R. A. Philippi).

b Ex pratis prope Rufino, Prov. Córdoba et S. Fé, Nov. 1900 (C. S.).

c Ex pratis prope Trenque-lánquen, Prov. B. Aires et Pampae centralis, Dec. 1900 (C. S.).

d Ex collinis prope Teka-choique, aest. 1889 (C. Moyano) et secus Río Carren-leofü Jan. 1900 (N. Illin).

e Ex collinis prope Lago Nahuel-huapi Mart. 1899 (A. Fernández).

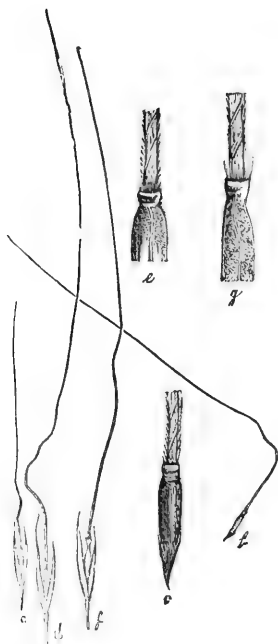
f/ Ex *Sierra de la Ventana* et *Sierra de Curámalal*, Dec. 1899 (C. S.).

g/ Ex *Sierra del Tandil*, Dec. 1891 (OK.) nec non Mrt. 1892 et Jan. 1901 (C. S.).

h/ Ex *Montevideo* (J. Arechavaleta).

k/ Ex collinis *Sierra chica de Córdoba* aest. 1889 (T. Stuckert).

17. *Stipa tenuis* Ph.



Stipa tenuis Ph.

a. Spicula $\frac{1}{2}$ var. typica

b. Flosculus $\frac{1}{2}$ » »

c. Flosculus $\frac{1}{2}$ » »

d. Corona $\frac{1}{2}$ » »

e. Spicula $\frac{1}{2}$ « Am. nordicae

f. Flosculus $\frac{1}{2}$ » » »

g. Corona » » »

Stipa tenuis Ph., Srt. Mend. II, Ann. Un. Chil., v. 34-36 p. 204 (1870)!

Stipa argentina Speg., Contr. al est. Fl. Sierra Ventana, p. 97 n. 312 (1896)!

Stipa neesiana OK., (non Trin.) pro parte, l.c., p. 372 (1896)!

Stipa setigera Auct. Am. Nord. (non Prsl) in Herbario meo.

Diag. Glumae lineari-lanceolatae, flosculo duplo triplove longiores, 1-3-nerves, e hyalino violascentes; flosculi subfusoides teretes ex opaco nitiduli, glabri, laeves; corona pusilla cylindraceo-turbinatula acie ciliolata basi leniter constricta; anthopodium flosculo 2-3-plove longius, albo-villosum; arista persistens tenuis 8-12-plo flosculo longior, ad tertium et quartum infima geniculata, non v. vix pubescens. Culmi folia setacea v. juncoidea scabriuscula longe superantes; panícula angusta, depauperata, relaxata.

Hab. Vulgata in campis siccioribus planis v. montuosis a *Río Negro* usque ad *Mendoza* (nec non in *California*) aest 1870—1890.

Obs. Perennis, caespitosula, caespitibus laxiusculis parvis v. pusillis (50-200 mm alt. et diam.).

Culmi solitarii v. pauci e quoque caespite, folia semper longe superantes graciles (150-450 mm alt.=0,75-1 mm diam.) anguste fistulosi, non v. vix subscabridi, laeves v. obsoletissime longitrorsum striati, 2-3-nodi, nodis non incrassatis concoloribus glabris.

Folia omnia isomorpha, virida v. pallescentia, limbis rectis flexuosulis v. subcircinatis, setaceis v. juncoideis rigidis convolutis, teretibus v. leniter compressulis (25-150 mm long.=0,4-1 mm diam.) extus glabris non carinatis, plus minusve scabris, non v. tenuiter longitrorsum striatis, ventre (1-2,25 mm lat. aprt.) cinerascanti-pulverulentis scabris, 3-7-sulcato-striatis, apice saepius subbreviscule attenuato-subulatis acutis, non v. plus minusve pungentibus, vaginis adpressis pallidioribus laevibus non striatis, quandoque glaberrimis, quandoque totis (rarius margine externo et anulatim tantum ad junctionem limborum) pubescenti-villosis, ore truncatis, auriculis subrectangulis semper densiuscule longe pilosobarbatis (supremis saepe exceptis), ligulis inferis angustissime marginiformibus subobsoletis, ceteris evolutis, superis ovatis v. lanceolatis, scariosulo-subhyalinis, integris v. vix denticulatis, glabris v. ad latera pilosis.

Inflorescentia anguste spicata (75-150 mm long.) depauperata laxiuscula, primo erecta adpressa, deorsum vagina folii supremi leniter ampliata vestita, dein exerta secunda patentiusculo-exhaurata, rachi tenui glabra scabrida, ramis alternis, geminatis v. solitariis, gracilibus scabris, supra medium paucipedicelligeris, pedicellis capillaribus trigono-angulosis (3-10 mm long.) apice clavulato-incrassatulis asperis.

Spiculae primo erectae adpressae, dein patentiusculae relaxatae; glumis semper adpressis, hyalino-subvirescentibus v. saepius fusco-violascentibus, carinatus, ad carinas saepius obsolete scabridis, flosculo duplo v. subtriplo longioribus, anguste lineari-lanceolatis, deorsum brevissime angustatis, sursum longissime attenuatis sed non v. vix subaristulatis, infera 1-nervi, additis nervis 2 alteris lateralibus brevissimis, (15-18 mm long.=1-1,15 mm lat.) superam 3-nervem (10-12 mm long.=1 mm lat.) longe superante; flosculis teretibus leniter subfusoidis v. obsoletissime subclavulatis (cum anthopodio et arista 50-110 mm long.=cum anthopodio et corona 6-7 mm long.=sine anthopodio et corona 3,75-4 mm long.=0,5-0,7 mm diam.) superne breviter leniterque angustatis, postice sensim sublongiuscule attenuatis, glumella infera coriacea primo pallida opaca dein subflavescente, postremo plus minusve ochracea atque nitentiuscula glaberrima sed in linea dorsali infera ad medium usque albo-pubescente, in tertio v. quarto supremo minutissime subimperspicueque papilloso-aspera; glumella supera pusilla hyalina aegre perspicua enervi glabra; anthopodio longiusculo pallido rigido acuto pungentiusculo (1,5-2 mm long.=0,12-0,18 mm diam.) dense adpressequ villosa, villis quartum inferum glumellae obtegentibus.

Arista tenuis longiuscula subrigidula persistens v. per aetatem ultimam aegre decidua (45-105 mm long.) nuda scabriuscula fuscescens, 2-geniculata, geniculo supero ad tertium posticum, infero ad quartum basale v. parum infra, sitis, sub geniculis torta et pubescens; articulatio aristae cum glumella non perspicua.

Corona cylindraceo-obconica parvula (0,25-0,35 mm long. et diam.) glabra laevi opaca, in juventute a glumella parum distincta, ab ipsa, dorso praecipue, sulculo obtuso separata, dein callosa pallidior bene limitata, acie recta acuta minute adpressequ pectinato-ciliolata.

Varietates sequentes distinguendae videntur:

a) *typica* Speg.: foliis capillaribus v. setaceis non striatis vix scabris, breviusculis saepe circinatis, totis glabris v. glaberrimis, glu-

mis 12-18 mm long., flosculis 6,5-7 mm long., aristisque 45-75 mm long. In campis boreali-patagonicis.

b) argentina (Speg.): foliis juncoideis striatis scaberrimis, limbis glabris, vaginis pubescentibus, glumis 10-15 mm long., flosculis 6-6,5 mm long., aristisque 75-105 mm long. In montuosis pampeanis vigens.

Specimina californica ab argentinensibus vix recedunt foliis laxè convolutis saepeque subplaniusculis, glumis longioribus, flosculis magis fusoides et ultra medium papillosis.

Specimina inspecta sunt:

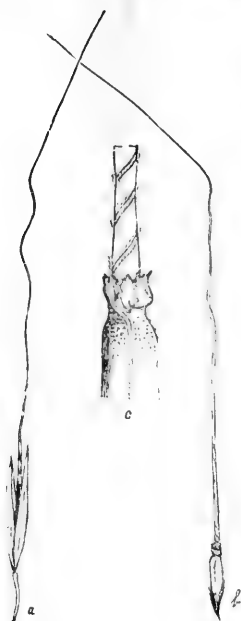
a) Ex campis aridis prope *Mendoza* (misit Cl. R. A. Philippi).

b) Ex pratis secus *Rio Negro* et *Rio Colorado*, Jan., Febr. 1898 (C. S.).

c) Ex pratis aridissimis circa *Bahía Blanca*, Dec. 1899 (C. S.).

d) Ex vallibus *Sierra Ventana*, Nov. 1895 et *Sierra de Carámalal*, Dec. 1899 (C. S.).

e) Ex andinis *Paso Cruz*, Jan. 1892 (OK.).

17. *Stipa sublaevis* Speg., n. sp.

Stipa sublaevis Speg.

a. Spicula $\frac{1}{4}$ b. Flosculus $\frac{1}{4}$ c. Corona $\frac{2}{4}$

Diag. Glumae sublineari-lanceolatae, flosculum duplo superantes, 3-nerves, violascentes; flosculus subclavulatus e tereti obsolete angulosus, glaber laevis, vix in parte dorsali suprema parce papillatus; corona cupuliformis acie horizontalis ciliolata, basi rotundato-constricta; anthopodium 3-4-plove flosculo longius, albo-villosum; arista persistens, parum supra et infra medium geniculata subglabra. Culmi, nodis subglabris, folia ex applanato convoluta subscabrida longe superantes; panicula \pm ve conferta secunda v. nutans.

Hab. In campis graminosis prope *Mar del Plata*, Dec. 1894 (C. S.) et *Sierra Curamalul*, Dec. 1899 (C. S.), nec non prope *Montevideo* (J. Archaveleta).

Obs. Perennis, non v. vix caespitosula, caespitibus valde relaxatis (50-500 mm alt. = 50-100 mm diam.).

Culmi folia fere semper longe superantes (250-1000 mm alt. = 0.75—2.50 mm diam.) teretes, glabri, non scabri, leniter longitrorsum striati, ad apicem usque foliati, 2-3-nodi, nodis incrassatis glabris v. vix pubescentibus, leniter fuscescentibus.

Folia omnia isomorpha, pallida viridia non v. obsoletissime subglauescentia, herbaceo-rigidula, limbis in juventute v. in sicco laxae convolutis non carinatis, per aetatem v. udis applanatis (25-250 mm

long.=2-4 mm lat.) erectiusculis, glabris obsolete scabridis, utrimque striatulo-sulcatis (ventre validius), 7-13-nervibus, nervo mediano non crassiore, sursum sensim attenuatis apiceque subulato-acutis non pungentibus, vaginis infimis relaxatis, superis adpressis pallidis, tenuiter striatis, glaberrimis v. ima basi subpubescentibus v. etiam in partis supremæ margine externo ciliolatis, ore angustato-coarctatis, glabris v. saepius piloso-barbatis, ligulis infimis obsoletis, ceteris semper anguste marginiformibus glabris scariosulis albescentibus v. fuscidulis, integris v. denticulato-fissis.

Inflorescentia paniculata (100-250 mm long.) dives v. \pm depauperata, primo erecta v. vix secunda, vagina folii supremi sat inflata deorsum vestita, dein exertiuscula patulo-nutans, rachi angulosa non v. vix scaberula, ramis alterne fasciculatis 1-5 in quoque nodo, tenuibus v. vix scabridis angulosis, ultra medium ramulosis v. pedicelligeris, pedicellis trigonis scabris (3-15 mm long.) apicem versus sensim incrassatulis.

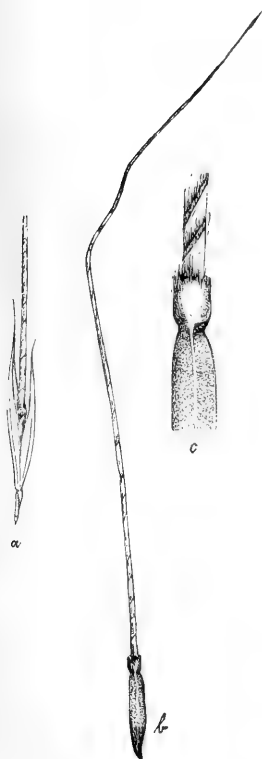
Spiculae primo erectae dein nutantes; glumis anguste v. sublineari-lanceolatis, obscure violascentibus v. purpurascentibus, deorsum leniter angustatis, sursum longiuscule attenuato-cuspidatis ac hyalinis, non v. vix subaristulatis, saepius nitentiusculis, non v. obsolete carinatis, ad carinas laevibus, 3-nervibus, infera (20-22 mm long.=2 mm lat.) superam (18-19 mm long.=2-2,15 mm lat.) parum superante; flosculis teretibus, non v. obsoletissime subangulosis, leniter clavulatis ac inaequilateralibus (cum anthopodio et arista 75-100 mm long.=cum anthopodio et corona 9-11 mm long.=sine anthopodio et corona 5-6 mm long.=1,10-1,30 mm diam.), glumella infera coriacea pallida v. leniter ochroleuca, non v. vix nitentiuscula, laevissima, sed in quarto supremo laxe grossiusculeque papillato-granulata, nervo dorsali et lateralibus vix anguloso-prominulis sed semper bene perspicuis, glaberrima, vix in dimidia nervi dorsalis parte infera adpresse pilosula, sursum brevissime validiuscule (subinaequilateraliter) angustata, non v. vix foveolato-angu-

lata, deorsum conoideo-attenuata; glumella supera pusilla lanceolata (1,25-1,50 mm long.=0,3 mm lat.) enervi, hyalina glabra; anthopodio longiusculo tenui (3-4 mm long.=0,15-0,20 mm diam.) pallido rigido acuto pungente, dense adpresseque albo-(per aetatem saepe subochroleuco-) villosa, villis quartum glumellae inferum obtegentibus et per dorsum excurrentibus.

Arista subcrassiuscula rigida (65-90 mm long.) persistens, pallida, 2-geniculata, geniculo supero supra medium, infero sub medio sitis, parte suprema recta scabrida, partem infimam tortam minuteque puberulam inter genu posticum et coronam aequante; articulatio aristae cum glumella adest, sed corona abscondita.

Corona eximie cupuliformis (0,5-0,75 mm alt.=0,75-1 mm diam.) basi rotundata recta glabra pallida, margine supero recto crassiusculo dense breviterque ciliolato-fimbriata.

Species *St. setigeræ* Prsl et affinibus glumella laevi vix in parte suprema leniter granulato-papillosa bene distincta.

18. *Stipa Archavaletai* Speg., n. sp.19. *Stipa Archavaletai* Speg.a. Spicula $\frac{1}{2}$.b. Flosculus $\frac{1}{2}$.c. Corona $\frac{1}{4}$.

Diag. Glumae elongato-lanceolatae, flosculo duplo et ultra longiores, 3-5 nerves, subviolascens; flosculus subteres, glaber, totus minutissime densissimeque papilloso-asperulus; corona cylindraneo-cupuliformis, acie horizontalis denticulato-setulosa, basi eximie constricta; anthopodium flosculum 4-plo superans, albo-villosum; arista persistens flosculo 9-10-plo longior, ad tertium et quartum supremam geniculata. Culmi folia ex applanato convoluta scabra longe superantes, ad nodos pubescentes; panicula depauperata nutans.

Hab. In campis graminosis prope *Montevideo* (J. Archavaleta) et etiam, sed rarissime, in rupestribus *Sierra del Tandil*, Mart. 1892 (C. S.).

Obs. Perennis, non v. vix caespitulosa, caespitibus valde relaxatis (150-450 mm alt.=50-150 mm diam.).

Culmi folia fere semper longe superantes (350-900 mm alt.=1-2 mm diam.) teretes glabri non scabri, non v. vix longitrorsum striati, ad apicem usque foliati, 2-3-nodi, nodis incrassatulis saepius retrorse pubescenti hispidulis non v. leniter fusciscentibus.

Folia omnia isomorpha, viridia, herbacea, limbis in juventute et in sicco laxo convolutis, carinatis, per aetatem v. udis applanatis (100-

400 mm long.=2-4 mm lat.) erectiusculis, extus primo laxe patenteque hirtis dein plus minusve glabratissimis sed semper scaberrimis, intus glabris non v. vix subscabridis, utrinque 11-23-nervuloso-costulatis, nervo mediano ad dorsum crassiore, sursum sensim breviterque attenuatis apiceque subulato-acutis non pungentibus, vaginis infimis relaxatis fibrose solutis, superis adpressis pallidis tenuiter striatis, totis, basin versus praecipue et margine externo, subretrorse pubescenti-hirtellis, ore angustato-coarctatis, auriculis longe pilosobarbatis, ligulis omnibus marginiformibus (infimis obsoletis) scariosulis albescensculis v. fusciculis glabris integris v. denticulato-fissis.

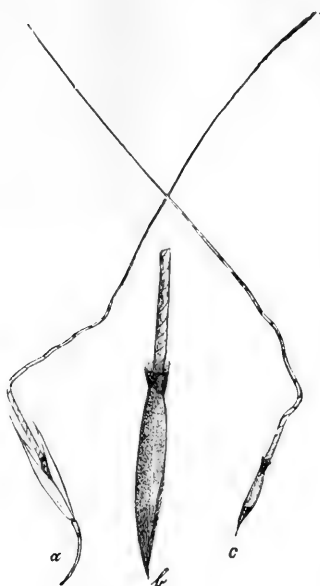
Inflorescentia panniculata (100-250 mm long.) plus minusve depauperata, primo erecta v. vix secunda, vagina folii supremi sat inflata deorsum vestita, dein exertiuscula patulo-nutans, rachi subterete laevissima non scabra, ramis alternis remotiusculis geminatis, apice tantum 1-5-pedicelligeris, cum pedicellis (5-25 mm long.) angulosis, apice leniter subclavulatis pubescenti-scabridis.

Spiculae primo erectae dein patulo-nutantes; glumis elongato-lanceolatis pallide violascentibus, deorsum breviter leniterque angustatis, sursum longe attenuato-cuspidatis ac hyalinis non aristulatis, saepius nitentiusculis, non v. leniter carinatulis, ad carinas laevibus, infera 3-nervi (32-38 mm long.=2 mm lat.) superam 5-nervem, conspicue latiore, (25-30 mm long.=3-3,50 mm lat.) longe superante; flosculis subteretibus, lenissime inaequilateralibus (cum anthopodio et arista 150-170 mm long.=cum anthopodio et corona 15-17 mm long.=sine anthopodio et corona 7,5-8 mm long.=1,25-1,50 mm lat.), glumiella infera coriacella albescens v. pallida opaca, tota, etiam in margine ventrali, minutissime densissimeque papilloso-scaberrima, nervo dorsali et lateralibus non prominulis et vix perspicuis, glaberrima vix in dimidia nervi dorsalis parte infera adpresse pilosula, utrinque breviter attenuato-angustata; glumiella supera pusilla lineari (2 mm long.=0,25 mm lat.) enervi hyalina glabra; anthopodio longo (5-6 mm long.=0,15-0,20 mm

diam.) rigido acuto pungente concolore toto dense adpresseque albopiloso, villis quartum glumellae inferum obtegentibus et per dorsum excurrentibus.

Arista subcrassiuscula rigida (135-150 mm long.) pallida nuda persistens, 2-geniculata, geniculo supero ad quartum summum, infero paulo infra tertium supremum sitis, sub geniculis valide torta ac leniter pubescenti-subvillosula, ceterum scabrida; articulatio aristae cum glumella omnino inconspicua.

Corona glumella concolor subcylindracea, obsolete obtuseque anguloso-trigona (2 mm long.=1,25 mm diam.), inferne eximie limitata rotundato-coarctata, ventre sinuata, laevis glabra, margine supero recto dense irregulariterque denticulato-fimbriata breviterque setulosa.

19. *Stipa torquata* Speg., n. sp.20. *Stipa torquata* Speg.a. Spicula $\frac{1}{4}$.b. Flosculus $\frac{1}{4}$.c. Flosculus $\frac{2}{4}$.

Diag. Glumae lanceolato-lineares, flosculo subduplo longiores, 3-5-nerves, violascentes; flosculus subtrigonus cinerascens glaber totus dense grosseque papilloso-scaber; corona cylindracea v. angusta subtrabinatula, purpurea, acie horizontalis ciliolata basi vix coarctata; anthopodium flosculo 3-plo longius, albo-villosum; arista persistens, flosculo 5-10-plo longior, ad tertium et sextum postica geniculata. Culmi folia setacea v. subjuncoidea e pubescenti scabrida longe superantes, nodis pubescentibus; panícula depauperata laxa nutans.

Hab. Non rara in pratis aridis «Estacion Tornquist» prope *Sierra Ventana*, Dec. 1899 (C. S.).

Obs. Perennis, non v. vix caespitosula, caespitibus laxiusculis parvis v. minimis (50-250 mm alt. = 25-75 mm diam.).

Culmi folia semper longe superantes graciles (200-450 mm alt. = 0,75-1,75 mm diam.) teretes e medullosa farcti fistulosi, glabri non scabri, non v. leniter longitrorsum striatuli, ad apicem usque foliati, 2-3-nodi, nodis glaberrimis v. obsolete laxe adpresse retrorseque pilosulis, non v. parum incrassatis atque vix fusciscentibus.

Folia omnia isomorpha pallide viridia leniter glaucescentia, limbis complicato-subteretibus e setaceo subjuncoideis (25-200 mm long. = 0,4-0,6 mm diam.) rigidulis erectiusculis, extus in juventute sparse minute, saepius retrorse, setuloso-hirtellis dein glabratis vix marginis scabridis, non v. obsolete striatis, intus (0,75-1,15 mm lat. aprt.) tenuiter 3-7-nervulosus non scabris, sursum sensim attenuatis apice subulato-mucronatis non v. vix subpungentibus, vaginis saepius adpressis pallidioribus tenuiter striatulis non scabris glabris, sed radicalibus margine externo saepius pectinato-ciliolatis, ore rotundato-subtruncatis barbatulis (culmigenis imberbibus), ligulis anguste marginiformibus e scariosulo subhyalinis glabris integris v. subbilobis.

Inflorescentia paniculata (60-120 mm long.) valde depauperata, primo erecta secunda, vagina folii supremi deorsum plus minusve vestita, dein exerta patulo-nutans, rachi tenui angulosa glabra non scabra, ramis remotis gracilibus longiusculis trigonis ad angulos pubescenti-scabriusculis apice 1-3-pedicelligeris, pedicellis tenuibus elongatis (5-20 mm long.) angulosis scabriusculis, apice vix incrassatulis.

Spiculæ primo erectae dein rive patulo-nutantes; glumis lanceolato-linearibus, plus minusve pallide violascentibus v. purpurascentibus, deorsum brevissime lenissimeque angustatis, sursum sensim longissimeque attenuato-cuspidatis hyalinis non aristulatis, saepius nitentiusculis obsolete carinatulis, flosculo suo subduplo longioribus, infera 3-nervi (15-23 mm long. = 1,5-1,75 mm lat.) superam 5-nervem (14-20 mm long. = 2-2,25 mm lat.) parum superante; flosculis eximie trigonis v. obsolete subtetragonis (cum anthopodio et arista 50-100 mm long. = cum anthopodio et corona 8-9 mm long. = sine anthopodio et corona 4,5-5,25 mm long. = 0,85-1 mm diam.) non v. vix subinaequilateralibus, glumella infera coriacea primo albescente dein pallide avellanea v. roseo-cinerea opaca, etiam in margine ventrali sed tenuius, dense grosseque papilloso-scaberrima, nervo dorsali et lateralibus non prominulis et vix per-

spicuis, glaberrima, vix in dimidia nervi dorsalis parte infera adpresse pilosula, utrimque leniter breviterque angustata; glumella supera parvula ovato-lanceolata (1,5-2 mm long.) subcoriacella hyalina enervi glabra; anthopodio longo (2,75-3 mm long.=0,15-0,20 mm diam.) rigido acuto pungente toto albido dense adpresseque albo-villoso, villis quintum glumellae interum obtegentibus et per dorsum excurrentibus.

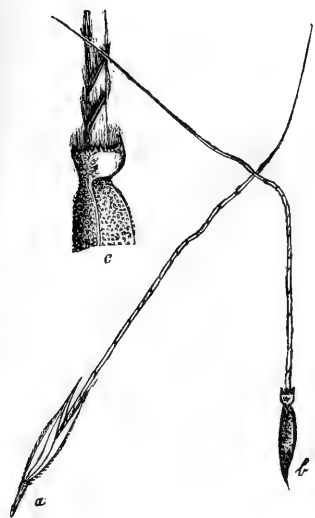
Arista subtenuis rigida (40-90 mm long.) pallide ochracea v. fuscescens, nuda, persistens, 2-geniculata, genu supero ad tertium posticum, infero ad sextum basale sitis, scabriuscula, vix ima basi leniter pubescens; articulatio aristae cum glumella omnino imper-spicua.

Corona cylindraco-turbinatula saepius e latere compressula (0,80-1 mm long.=0,6-0,75 mm diam.), semper intense pulchreque violaceo-purpurea laevi, basi subobliqua optime a glumella limitata, ad latera minute foveolata, ventre sinuatula, ad marginem superum dense minuteque pectinato-ciliolata, setulis (0,5 mm long.) albidis.

21. *Stipa ligularis* (Grisb.) Speg.

Stipa neesiana Trin. var. *ligularis* Grisb., Symb. ad Fl. Arg., p. 298, n. 1902 (1879)!

Diag. Glumae elongato-lanceolatae, flosculo subduplo longiores, 3-nerves, subviolascentes; flosculus subteres pallidus, totus minute densiusculeque papillosus; corona cylindraceo-cupuliformis brevis acie obliqua ciliolata, basi eximie abrupteque coarctata; anthopodium 3-4-plo flosculo longius, albo-villosum; arista persistens flosculo 8-9-plo longior, ad tertium supremum et ad medium geniculata. Culmi folia ex applanato subconvoluta sublaevia longe superantes, nodis pubescentibus; panícula subdepauperata laxa nutans.



21. *Stipa ligularis* (Gr.) Speg.

- a. Spicula $\frac{1}{2}$
 b. Flosculus $\frac{1}{2}$
 c. Corona $\frac{1}{4}$

Hab. In pratis editioribus prope *Concepción del Uruguay*, Rep. Argentina, Oct. 1875 (P. G. Lorentz), in *Sierra de Curamalal*, Dec. 1899 (C. S.), nec non prope *Montevideo* (J. Archavaleta).

Obs. Perennis v. subcaespitosa, caespitibus valde relaxatis, mediocribus v. submajusculis (250-500 mm alt.=50-150 mm diam.).

Culmi folia semper longe superantes subgraciles v. robusti (300-750 mm alt.=1-1,75 mm diam.) teretes e meduloso-farctis fistulosi,

glabri non scabri, leniter longitrorsum striatuli, ad apicem usque foliati, 2-3-nodi, nodis incrassatulis, saepius retrorse, pubescenti-hirtellis (nec *glabris* enft. Grisb. l.c.) non v. leniter fuscescentibus.

Folia omnia isomorpha, viridia herbacea, limbis in juventute et in sicco convolutis carinatulis, per aetatem v. udis applanatis (100-40 mm long.=2-5 mm lat.) erectiusculis, utrimque laxè v. subdense patenteque hirtò-pilosis, per aetatem v. culmigenis plus minusve glabris et scabris, utrimque 9-17-nervosis, nervo medio in utraque pagina parum caeteris crassiore, sursum sensim et breviuscule attenuatis apiceque subulato-acutis non pungentibus, vaginis infimis relaxatulis, superis adpressis, pallidis tenuiter striatis, plus minusve glabris, radicalibus in dimidia parte supra et culmiculis e contra in dimidia parte infera pubescenti-hirtellis, ore coarctatis atque longiuscule piloso-barbatis, auriculis obtusis, ligulis radicalibus marginiformibus (infimis saepe obsoletis), culmiculis valde evolutis subovato-truncatis (1-5 mm long.) scariosulis albescentibus v. fuscidulis, integris v. denticulato-fissis, glabris.

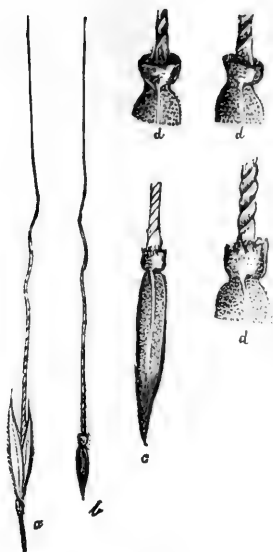
Inflorescentia paniculata (150-250 mm long.) subdepauperata, primo erecta secunda, vagina folii supremi sat inflata deorsum vestita, dein longiuscule exerta patulo-nutans, rachi subterete laevi v. scabriuscula, ramis remotis alternis geminatis, apice tantum 1-5-pedicelligeris, cum pedicellis (2-15 mm long.) angulosis apice leniter clavulatis pubescenti-scabridis.

Spiculæ primo erectae dein patulo-nutantes; glumis elongato-lanceolatis, pallide violascentibus, deorsum breviter leniterque angustatis, sursum longiuscule attenuato-cuspidatis ac hyalinis, non aristulatis, saepius nitentiusculis, non v. leniter carinatulis, ad carinas et margines minute sublaxeque pilosulis, infera 3-nervi (18-20 mm long.=2,5 mm lat.) inferam 5-nervem (15-18 mm long.=2,50 mm lat.) parum superante; flosculis e terete subtrigonis, leniter dorso subgibbosulis ac inaequilateralibus (cum anthopodio et arista 100-110

mm long.=cum anthopodio et corona 11-12 mm long.=sine anthopodio et corona 6-6,5 mm long.=1,15-1,25 mm diam.), glumella infera coriacea albescente v. pallida opaca, tota, etiam in margine ventrali, papilloso-scabra, papillis in parte infera et ventrali minutissimis et subobsoletis, in parte supera majoribus distinctissimis, nervo dorsali et lateralibus non v. vix prominulis sed bene perspicuis, glaberrima vix in dimidia nervi dorsali parte infera adpresse pubescente, utrimque (dorso praecipue) breviter et valide angustata, apice saepius subplicato-trigona; glumella supera pusilla elliptica (1-1,25 mm long.=0,25 mm lat.) enervi hyalina glabra; anthopodio longo (3,75-4 mm long.=0,15-0,20 mm diam.) rigido acuto concolore, toto dense adpresseque albo-villoso, villis quartum glumellae inferum obtegentibus et per dorsum excurrentibus.

Arista subcrassiuscula rigida (90-100 mm long.) pallida nuda persistente, 2-geniculata, geniculo supero ad tertium supremum v. paulo infra, infero ad medium v. ad tertium posticum sitis, parte recta scabrida suprema, inferam (sub geniculo basali) tortam et pubescentem non v. vix aequante; articulatio aristae cum glumella non perspicua.

Corona pallida cylindracea v. turbinato-cupulata brevis (0,5-0,7 mm long.=1-1,15 mm diam.) laevis, deorsum rotundata non v. sat obliqua, sursum saepius etiam obliqua, dense minuteque denticulato-ciliolata, setulis brevissimis concoloribus.

22. *Stipa setigera* Prls.22. *Stipa setigera* Presl

- a. Spicula
b. Flosculus
c. Flosculus
d. Corona

Stipa setigera Presl. (non auct. *Americae nordicae!*), Reliq. Haenkeanae, v. I, p. 226 (1836). = Ind. Kew, v. II, p. 999.

Stipa neesiana Trin., Act. Petrop., Ser. VI, p. 27 (1846).

Stipa intricata Godr., Mem. Acad. Montp., sect. med., I. p. 449 (1858). = P. Aschers. & P. Graehn., Syn. d. mitteleurop. Fl. bd. II, p. 113 (1899).

Stipa neesiana Trin., Arch., las gram. urug., p. 252, n. 1 (1894)! = OK., Rev. gen. plant. III, 2, p. 372, pro parte (1898)!

Diag. Glumae elongato-lanceolatae, flosculum subduplo superantes, 3-5 nerves, hyalinae v. violascentes; flosculus teretiusculus pallidus v. fuscus, glaber, totus minute denseque papillo-sus; corona obconica v. cupuliformis,

callosa, brevis, concolor v. heterochroma, acie horizontalis non v. \pm ve denticulata, nuda v. ciliata, basi eximie constricta; anthopopium flosculo 2-3-plo longius, albo villosus; arista persistens, flosculo 7-8-plo longior, paulo supra et infra medium geniculata. Culmi folia e subconvoluta applata \pm ve pubescenti-hirtella, superantes, ad nodos retrorse hirsuti; panicula saepius \pm ve depauperata et laxa nutans.

Hab. Vulgatissima per totam pamparum planitiem a *Rio Negro* usque ad *Salta*; aest 1880-1900.

Obs. Perennis subcaespitosa, caespitibus valde relaxatis, medio-cribus v. parvis (100-500 mm alt.=50-150 mm diam.).

Culmi folia semper superantes robusti v. graciles (150-700 mm alt.=1-2 mm diam.) teretes e medullosa-farcti fistulosi, glabri non scabri, non v. vix longitrossum striati, ad apicem usque foliati, 2-3-nodi, nodis saepius incrassatulis, saepiusque retrorse pubescenti-villosis, non v. plus minusve fusciscentibus.

Folia omnia isomorpha, viridia v. leniter glaucescentia, herbacea v. subrigidula, limbis in juventute et in sicco convolutis non v. obsolete carinatis per aetatem v. udis applanatis (50-450 mm long.=2-5 mm lat.) erectiusculis, quandoque utrinque glaberrimis, quandoque omnes v. pro parte utrinque plus minusve dense patentiusculeque pubescenti-hirtellis, plus minusve scabris, ventre et dorso 9-21-striato-nervulosis, nervo mediano ad hypophyllum tantum nonnihil ceteris crassiore, sursum sensim et subbrevisiter attenuatis apiceque subulato-acutis, non pungentibus, vaginis infimis relaxatis, superis adpressis pallidis tenuiter striatulis glabris v. culmigenis basin versus leniter pubescentibus, ore coarctatulis atque longiuscule piloso-barbatis, auriculis non v. vix evolutis obtusis, ligulis omnibus anguste marginiformibus (infimis saepe obsoletis) scariosulis albescentibus v. fusciculis, integris v. denticulato-fissis, glabris.

Inflorescentia panniculata (100-250 mm long.) dives v. plus minusve depauperata, secunda, vagina folii supremi sat inflata deorsum vestita, dein longiuscule exerta patulo-nutans, rachi laevissima glabra non v. obsolete scabra, ramis remotis alternis geminatis, plus minusve elongatis gracilibus, ultra medium 1-10-pedicelligeris, pedicellis (3-15 mm long.) saepius trigonis, ad angulos pubescenti-scabridis, apice sensim lenissimeque incrassatulis.

Spiculae primo erectiusculae constipatae, dein relaxatae nutantes; glumis elongato-lanceolatis hyalinis v. saepius plus minus-

ve intense purpureo-violascentibus. deorsum breviter angustatis, sursum longiuscule attenuato-cuspidatis ac hyalinis, non v. vix aristulatis, saepius nitentiusculis, carinatulis, ad carinas scabriusculis margine glabris v. saepe sparsim pilosulis, infera 3-nervi (15-18 mm long.=2-2,25 mm lat.) superam sub 5-nervem, nervis extimis saepius brevissimis v. subobsoletis, (14-15 mm long.=2 mm lat.) parum superante; flosculis subteretibus, obsolete subtricarinatulis, dorso leniter inaequilateralibus (cum anthopodio et arista 60-100 mm long.=cum anthopodio et corona 7-10 mm long.=sine anthopodio et corona 4,5-5,5 mm long.=1-1,15 mm diam.), glumella infera coriacea albescens v. plus minusve purpurascens, opaca, tota, etiam in margine ventrali, minute denseque papilloso-scabra, utrimque sed saepius deorsum praecipue attenuata, quandoque subfusoides, quandoque leniter clavulata, glaberrima, vix in dimidia nervi dorsalis parte infera adpresse pubescente; glumella supera pusilla elliptica (1,50 mm long.=0,5 mm lat.) enervi hyalina v. subviolascens glabra; anthopodio longo (2,5-4 mm long.=0,15-0,20 mm diam.) rigido acuto concolore, toto dense adpresseque albobilloso, villis quartum inferum glumellae obtegentibus.

Arista e crassiusculo subtenuis rigida (50-85 mm long.) pallida persistente nuda, 2-geniculata, geniculo supero nonnihil supra, infero nonnihil infra medium sitis, parte suprema recta scabrida, partem inferam tortam et pubescentem non v. vix aequante; articulatio aristae cum glumella eximia sed parum distincta.

Corona distinctissima, hemisphaerico-cupulata v. obconico-turbinata (0,25-0,50 mm alt.=0,75-1,25 mm diam.) callosa dura fere glabra laevis, inferne coarctatione dorso validissima ventre obsoleta limitata, recta v. plus minusve obliqua alba, ochroleuca, violascens v. atro-purpurea superne truncata depressula, rarius convexula, margine acuto nullo v. brevi subintegro, denticulato, pectinato v. fimbriato-setulosa.

Species varietates et formas plurimas passim occurrentes exhibens, quarum nobiliores sunt sequentes:

a) glabrata Arech.: foliis glaberrimis plus minusve glaucescentibus, nodis culmorum et ore vaginarum tamen semper pubescenti-barbatis.

b) hispidula Speg.: foliis plus minusve patentim piloso-hirtis viridibus, vaginis basin versus pubescentibus. Haec varietas formas sequentes offert:

f) pallida; glumis hyalinis, flosculis et corona albescentibus v. pallescentibus.

g) purpurascens; glumis violascentibus, flosculis et corona e violaceo plus minusve intense purpurascentibus.

h) versicolor; glumis pallide violascentibus, flosculis albescentibus v. ochroleucis, corona purpurea v. atro-purpurea.

Sporadice, sed rarius, inveniuntur specimina floribus radicalibus donata; spiculae solitariae v. 3-5 dense constipatae vaginis aphyllis brevibus obtectae; glumae ovatae albescentes (5-6 mm long.) obtusae v. vix acutiusculae; flosculi elliptici, dorso, sed ventre praecipue, compressi (4 mm long.=1,5 mm lat.=0,5 mm crass.) anthopodio et arista destituti, corona obsoleta callosa obtusa glabra v. subpuberula.

Stipa Rudolphi Speg. (Phil.) (*St. macrathera* Phil. in Ann. Univ. chil. 1895 vol. XCIV p. 720=non *Stipa macrathera* (Nees) Speg., (*Urachne macrathera* Nees, Steud., Syn. gram. p. 123 n. 24) etsi valde affinis recedit corona cylindracea longiore dense minute que ciliolato-fimbriata et praecipue arista per aetatem facillime caduca.

Specimina inspecta sunt:

a) Ex pratis secus *Río Negro* et *Río Colorado*, Jan. et Febr. 1898 (C. S.).

b) Ex campis circa *Bahía Blanca*, Dec. 1899 (C. S.).

c) Ex rupestribus *Sierra Ventana*, *Sierra Curámalal*, *Sierra de Olavarria* et *Sierra del Tandil* aest. 1892-1899 (C. S.).

d) Ex pratis circa *La Plata*, *B. Aires*, *9 de Julio* et *Trenque-lauquen*, aest. 1880-1900 (C. S.).

e) Ex pratis prope *Rosario*, *San Luís* et *Mendoza*, aest. 1895-97 (C. S.).

f/ Ex pratis et collinis prope *Córdoba*, per ann. 1891-98 (O. K. et T. Stuckert.)

g/ Ex campis prope *Catamarca* (F. Kurtz).

h/ Ex campis prope *Tucuman*, aest. 1890-97 (M. Lillo, F. Sivori, C. S.).

i/ Ex campis et collinis prov. *Salta*, aest. 1896-97 (C. S.).

l/ Ex campis prope *Corrientes* et *Colonia Resistencia*, aest. 1883-87 (C. S.).

m/ Ex campis circa *Montevideo*, aest. 1891-93 (J. Arechavaleta, C. S.).

V. *JARAVA* (R. & P.)

Char. Glumae flosculo breviores v. longiores; flosculus e lanceolato fuscoideus, glaber v. pubescens, apice abrupte longeque papposo-villosus, glumellae inferae margine altero externo, alterum internum oblegente; glumella supera \pm evoluta plana non v. obsolete nervosa; anthopodium diametrum flosculi non v. parum superans; corona nulla; arista nuda tenuis, flosculo pluries longior persistens v. caduca non v. obsolete geniculata.

23. *Stipa papposa* Nees.



23. *Stipa papposa* Nees
a. Spicula
b. Flosculus
c. Flosculus

Stipa papposa Nees ab Esenb., Agrost. bras., p. 377 (1829).

Stipa Delilei Steud, Syn. plant. glum. V. I. p. 126, n. 31 (1855).

Stipa jarava Ind. Kew., vol. II, p. 999.

Stipa papposa Del., Ind. Sem. Hort. monsp. p. 7 (1849).

Diag. Glumae angustissime lineares parvae, flosculum dimidium plus minusve aequantes, 1-nerves, hyalinae; flosculus

lineari-lanceolatus glaber, sursum subasperulus, apice abrupte patentimque villis ipso vix brevioribus comatus; anthopodium diametrum flosculi, 2-3-plo superans albo-villosum; arista persistens flosculo 3-5-plo longior. Culmi simplices folia e convoluto-planiuscula glabra sublaevia longe superantes, panicula diffusa erectav. nutans.

Hab. Vulgata per totam planitiem pampeanam a *Rto Negro* (Patagonia) usque ad *Chaco*, *Misiones* etc., per ann. 1880-1900.

Obs. Perennis, dense v. laxe caespitosa.

Culmi folia longe superantes (150-650 mm alt.) glabri vaginati, nodis non v. vix incrassatulis glabris.

Folia viridia non v. leniter glaucescentia, quandoque brevicaespitosa (15-50 mm alt.) conferta convoluta (non juncea!) rigidula acuta non v. vix subpungentia (clausa 0,4-0,7 mm diam.=aperta 1-2,5 mm lat.) quandoque elongata relaxata (100-400 mm long.) planiuscula (2-4 mm lat.) vix in sicco plus minusve convoluta, limbis glabris non v. vix in juventute scaberulis, leniter 5-15-striatis, vaginis adpressis v. relaxatis laevibus, ore truncato-auriculatis, auriculis parce longiusculeque piloso-barbatis in senectute saepius nudis, ligulis angustis scariosulis integris v. plus minusve denticulato-erosulis glabris.

Inflorescentia ample paniculata laxissima erectiuscula v. secunda (40-250 mm long.) nuda v. vagina folii supremi parce inflata vestita, ramis tenuibus angulosis scabridis pedicellis, (2-12 mm long.) leniter compressulis sursum vix incrassatulis vix scabridis.

Spiculae relaxatae erectae v. patulae; glumis flosculo semper conspicue brevioribus, angustissime linearibus, non v. vix carinatis obsolete 1-nerviis, infera *angustiore* et *breviore* (5-7 mm long.=

0,5-0,4 mm lat.), supera latiore longioreque (6,5-7 mm long.= 0,5-0,6 mm lat.); flosculi angustissime lineari-lanceolati v. fusoides (cum anthopodio et arista 30-45 mm long.= cum anthopodio sine arista 7-9 mm long.= sine anthopodio et arista 6-7,5 mm long.= 0,4-0,5 mm diam.), glumellâ infera vix rigidula pallida v. v. lenissime violascente, laevi v. minutissime, tota v. superne tantum, pulverulento-scaberula, in septima v. octava parte suprema abrupte longeque papposo-villosa, pilis tenuibus rectis (4-5 mm long.) albis, supera triplo breviora (2-3 mm long.) enervi hyalina obtusa glabra; anthopodio terete (1-1,5 mm long.) toto adpresse longiusculeque albo-villosa.

Arista tenuis etsi sat rigidula (20-35 mm long.) pallida v. leniter rubescens, tota a basi nuda, in parte sexta v. septima infirma torta et subgeniculata, ceterum recta.

Articulatio eximia sed pilis valvulae abscondita nervoso-annuliformis non v. vix subincrassatula.

Formae facile duae distinguendae:

a) minor Speg.: foliis brevissimis dense caespitosis filiformis v. setaceo-involutis (15-50 mm long.) culmis erectis rigidulis (200-250 mm alt.), panicula vaginata erecta contracta (40-60 mm long.), flosculis (7 mm long.) et aristis (20-25 mm long.) minoribus.

In locis aridis, sabulosis v. ad muros vigens.

b) major Speg.: foliis elongatis relaxatis planis (100-400 long.= 2-4 mm lat.) culmis arcuatis (400-650 mm alt.), panicula ampla nutans (100-250 mm long.) relaxa, nuda, flosculis (8-9 mm long.) (et aristis (30-35 mm long.) maioribus.

In pratis editoribus v. ad fluviorum margines.

Species ab incolis «*Plumerillos*», «*Flechilla mansa*», *Pastillo de raíz* vocata et pabulum pecudum optimum praebens.

24. *Stipa ichu* (R. & P.) Knth

Jarava ichu R. & P., Flor peruv. v. I, t. 6, ad 6.

Stipa Jarava Beauv., Steud., l.c., p. 127.

Stipa ichu Knth., En. plant., v. I, p. 183, n. 29 (1833).

Diag. Glumae angustissime lineares, flosculo triplo longiores pappum superantes, 1-3-nerves hyalinae; flosculus subfusoides pubescens apice abrupte villis papposis patentiusculis ipso duplo longioribus comatus; anthopodium diametro flosculi 2-3-plo brevius villosulum; arista persistens, flosculo

2-7-plo longior. Culmi arundinacei, folia capillaria scaberrima longissime superantes, panícula magna nutans.

Hab. In montanis et praecipue ad fissuras rupium prope *Trancas*, *Pampa grande*, *Las Arcas*, etc. in prov. Tucumán et Salta, aest. 1897.

Obs. Perennis, fasciculato-caespitosa.

Culmi folia duplo et ultra superantes crassiusculi (500-1200 mm alt.=2-4 mm diam.) inferne farcti superne fistulosi, laeves sed tenuissime scabri, foliati, erecti, recti, ad nodos non v. vix incrassatos glabros purpurascens leniter geniculati.

Folia subdimorpha, radicalia laxiuscula patentim recurva, limbis complicato-teretibus tenuissimis (300-500 mm alt.=0,3-0,4 mm diam.) extus scaberrimis sed non striatis, intus tenuiter 5-7-costulato-nervosis pulverulento-subpubescentibus, apice longiuscule attenuato-

mucronatis non pungentibus, etsi rigidulis gracilitate causa molli-bus, vaginis pallidis glabris ore truncatis, auriculis longe parceque piloso-barbatis, ligulis obsoletis; culmicola erecta v. patentia, lim-bis in vivo planiusculis in sicco laxe convolutis (200-300 mm long. = 3-5 mm lat.) rigidulis dorso scabris non striatis, ventre non sca-bris sed subcinerascenti-pruinulosis 11-15-sulcato-costulatis, vagi-ginis adpressis vix scabris, ore sensim angustatis, auriculis longe piloso-barbatis, ligulis latiusculis obliquis scariosis fissis v. den-ticulatis glabris.

Inflorescentia majuscula panniculata (300-400 mm long.) conferta ramosa secunda nutans, basi vagina folii supremi parum inflata plus minusve vestita, ramis patulis gracillimis scabriusculis, pedicellis numerosissimis gracillimis adpressis (1-5 mm long.) scabris sur-sum lenissime incrassatulis.

Spiculae constipatae; glumis hyalinis flosculum et pappum su-perantibus, angustissime linearibus carinatulis, parum inaequalibus infera obsolete 1-nervi (7-9 mm long. = 0,4-0,6 mm lat.) superam tenuissime obsoleteque 3-nervem (6,5-8,5 mm long. = 0,5 mm lat.) vix superante; flosculi tereti-subfusoides (cum anthopodio et arista 13-16 mm long. = cum anthopodio sine arista 2 mm long. = 0,3 mm diam.) utrimque brevissime leniterque attenuati, glumella infera vix rigidula per aetatem fuscescente minute adpresse laxaeque apice abrupte patuleque papposo-villosa, pilis valde numerosis tenuibus exharatis duplo flosculo longioribus (4 mm long.) albidis, glumella supera vix tertio brevior acutiuscula enervi hyalina glabra; antho-podio pusillo (0,10 mm long.) acutiusculo dense breviterque albo-villoso.

Arista tenuis persistens (10-14 mm long.) non v. obsoletissime torto-geniculata tota nuda, minute denseque denticulato-scabra. *Articulatio* aristae cum glumella imperspicua.

Species eximia ab incolis sub nomine *Silbinga* v. *siringa* cognita, sequentibus valde affinis et acute distinguenda.

25. *Stipa gynerioides* Phil.25. *Stipa gynerioides* Ph.

- a. Spicula $\frac{1}{2}$
 b. Flosculus $\frac{1}{2}$
 c. Flosculus $\frac{1}{2}$

Stipa gynerioides Ph., Sert. mend. II, An. Un. chil. p. 203, n. 235 (1870)!

Stipa vulpiaeformis Ces., Ill. di alc. plant. prof. Strobel, p. 15 (1871).

Stipa ichu Speg. (non (R. & P.) Kunth) in Cont. Flor. Vent. p. 63, n. 307 (1896).

Diag. Glumae anguste lineares flosculo duplo longiores pappum superantes, 1-3-nerves, subyalinae; flosculus fusioideus pubescens apice villis papposis ipsum aequantibus coma tus; anthopodium diametro flosculi duplo brevius, villosum; arista subpersistens, flosculo 3-5-plo longior.

Culmi folia setacea scabra aequantes v. superantes, panicula angusta sublinearis vix secunda.

Hab. Vulgata per totam planitiem pampeanā nec non in collinis a Río Negro usque ad Tucumán, per ann. 1880-1900.

Obs. Perennis, fasciculato-caespitosa.

Culmi folia aequantes v. vix superantes graciles (250-900 mm alt.=1-1,50 mm diam.) toti fistulosi, rarius basin versus subspongiose farcti, laeves v. scabri, foliati, recti, nodis leniter incrassatulis anguste cingulato-constrictis concoloribus.

Folia omnia isomorpha constipata, limbis complicato-teretibus erectis rectis (200-700 mm long.=0,3-0,8 mm diam.) extus scabris sed non striatis, intus tenuissime 3-5-costulato-nervosis atque pulverulento-pubescentibus, apice longe attenuato-mucronatis rigidulis pungentibusque, vaginis pallidis glabris ore oblique truncatis, auri-

culis pubescentibus v. piloso-barbatis, ligulis obsoletis v. in culmiculis parum evolutis scariosulis integris, bilobis v. denticulato-fissis, glabris.

Inflorescentia angustissima subspicata longiuscula conferta (100-250 mm long.=5-10 mm diam.) non v. vix secunda, inter folia abscondita v. vix apice parum exerta, ad medium usque et ultra vagina folii supremi sat inflata vestita, rachi scabra, ramis erectis adpressis pedicellis valde numerosis adpressis scabris (1-5 mm long.) sursum parum incrassatulis.

Spiculae constipatae; glumis subhyalinis anguste linearibus carinatis, apice acutis v. minute irregulariterque 1-2-denticulatis, infera 1-nervi (7-9 mm long.=0,4-0,6 mm lat.) superam tenuissime obsoleteque 3-nervem (6,5-8,5 mm long.=0,5-0,6 mm lat.) vix superante; flosculis tereti-lanceolatis v. obclavulatis (cum anthopodio et arista 15-26 mm long.=cum anthopodio sine arista 3-4 mm long.=0,4 mm diam.) sursum attenuato-subrostratis, glumella infera vix rigidula semper pallida minute laxequae pubescente, pilis apice semisim longioribus apicalibusque abrupte elongatis (3-4 mm long.) exharatis sat numerosis pappum flosculi longitudine aequans albidum efformantibus, glumella supera tertio brevior acutiuscula nerve hyalina glabra; anthopodio brevissimo (0,10-0,15 mm long.) acutiusculo dense breviterque albo-villoso.

Arista tenuis, ad maturitatem tantum facile decidua (12-22 mm long.) non v. obsoletissime torto-geniculata, tota nuda sed scabrida. Articulatio glumellae cum arista imperspicua.

Species praecipue in aridis et sabulosis vigens, ab incolis sub nominibus pluribus ut *Paja de techar*, *Paja vizeachera* etc. cum multis aliis confusa.

26. *Stipa leptostachya* Griseb.26. *Stipa leptostachya* Gris.a. Spicula $\frac{1}{2}$ b. Flosculus $\frac{1}{2}$ c. Flosculus $\frac{1}{2}$

Stipa leptostachya Griseb. Symb. ad Fl. arg., p. 299, n. 1906 (1879)!

Diag. Glumae anguste lineares flosculo, subduplo longiores pappum aequantes 1-3-nerves, hyalinae v. subviolascens; flosculus subfusoides subpubescens, apice pilis paucis erectis ipsum dimidium vix aequantibus comatus; anthopodium diametro flosculi triplo brevius glabrum; arista decidua flosculo 6-8-plo longior. Culmi folia setacea scabrida non v. parum superantes, panícula angustissime linearis depauperata.

Hab. In montanis aridis Prv *Salta*, *Jujui* et *Puna de Atacama*, per ann 1897.

Obs. Perennis fasciculata-caespitosa.

Culmi folia aequantes v. parum superantes graciles (250-500 mm alt.=1-1,75 mm diam.) toti faretii v. obsolete fistulosi, laeves non scabri, foliati, erecti recti, nodis leniter incrassatis rufescentibus glabris.

Folia omnia isomorpha, constipata, limbis complicato-teretibus tenuibus erectis rectis (150-450 mm long.=0,3-0,6 mm diam.) extus tenuissime 3-5-costulato-nervulosis pulverulento-subpubescentibus rigidulis apice longiuscule attenuato-mucronatis subpungentibusque, vaginis pallidis glabris ore oblique truncatis, auriculis longiuscule piloso-barbatis, ligulis obsoletis v. in culmicolis leniter evolutis denticulato-fissis glabris.

Inflorescentia angustissima subspicata, longiuscula (100-250 mm long.=5-7 mm lat.) non v. vix secunda, inter folia abscondita v. parum exerta, saepius ad medium usque et ultra vagina folii supremi sat inflata vestita, rachi subscabra, ramis erectis adpressis scabriusculis, pedicellis confertis adpressis (1-10 mm long.) sursum minute clavulato-incrassatulis scabris.

Spiculae constipatae; glumis hyalinis v. dorso plus minusve violaceo-tinctis, anguste linearibus carinatulis, apice acutis v. minute irregulariterque 1-2-denticulatis, infera 1-nervi (5-8 mm long.=0,3-0,4 mm lat.) superam tenuissime 3-nervem (4,5-7,5 mm long.=0,4-0,5 mm lat.) vix superante; flosculi tereti-lanceolati v. subfusoides (cum anthopodio et arista 25-40 mm long.=cum anthopodio sine arista 3,75-4,25 mm long.=0,5 mm diam.) sursum longius attenuati; glumella infera vix rigidula per aetatem fuscescente, minute laxissimeque pubescente, pilis apice sensim elongatis et paucis apicalibus erectis arista adpressis, flosculo duplo brevioribus (2-2,5 mm long.) albidis fere pappum v. comulam efficientibus ornatis; glumella supera dimidio brevior obtusiuscula enervi hyalina glabra; anthopodio brevissimo (0,10-0,15 mm long.) obtusiusculo obconico crassiusculo glaberrimo v. vix pilis brevissimis nonnullis adperso.

Arista tenuis, mox caducissima (21-36 mm long.) non v. absoluteissime torto-geniculata, tota nuda sed eximie papillato-scabra, articulatio aristae cum glumella non perspicua nec incrassata pilis abscondita.

Specimina inspecta sunt:

- a/ Ex *Quebrada del Toro*, Salta Jan 1894 (L. Torino).
- b/ Ex *Quebrada del Río Cachi*, Febr. 1897 (C. S.).
- c/ Ex *Rinconada de Jujui*, Febr. 1897 (C. S.).

27. *Stipa calchaquia* Speg., n. sp.27 *Stipa calchaquia* Speg.a. Spicula $\frac{1}{2}$ b. Flosculus $\frac{1}{2}$ c. Flosculus $\frac{1}{5}$

Diag. Glumae lanceolatae flosculo subduplo longiores, 3-nerves purpureo-maculatae; flosculus fusoides totus pilis albis sursum sensim elongatis atque pappose expansis, ipsius longitudinem dimidiam vix superantibus vestitus; anthopodium acutum dimidio diametro flosculi vix longius, albo-villosum; arista persistens duplo flosculo longior. Culmi graciles folia setacea laevia non superantes, panícula parva contracta vaginata.

Hab. In frigidissimis altiplanitie Valle Calchaquí et Puna de Atacama, per ann. 1897-1900.

Obs. Perennis caespitoso-fasciculata.

Culmi folia aequantes v. parum superantes gracillimi (50-100 mm alt.=0,5-0,7 mm diam.) laevissime glaberrimi purpurascens ad medium v. ad apicem usque foliosi, nodis absconditis.

Folia omnia isomorpha, dense caespitoso-constipata, limbis complicato-teretibus erectis rectis rigidis (10-30 mm long.=0,5-0,7 mm crass.) viridi-flavescentibus extus glaberrimis laevissimis, intus tenuiter 1-3-costulato-sulcatis atque intus et margine, basi praecipue, pubescentibus, apice non attenuatis abrupte cuneato-rotundatis sed mucrone rigido, brevi acuto pallescente armatis, vaginis pallidis in prima juventute pubescentibus, margine praecipue, per aetatem glabratis laevibus limbes longitudine superantibus, arcte inter se adpressis, ore obliquis angustatis, auriculis dense albeque velutino-villosulis, ligulis angustis hyalinis saepius bilobis ventre glabris dorso margineque longe villosa-barbatis.

Inflorescentia angusta subspicata, contracta, 15-25-spiculigera, in juventute vagina folia supremi amplexa, folia non v. vix superans, dein rachi glabra elongata nuda relaxata longe e caespite exerta (20-30 mm long.), ramis pedicellisque (1-6 mm long.) purpurascens glaberrimis v. vix ad angulos obsolete subscabris, erectis apice non v. vix clavulatis.

Spiculae constipatae v. relaxatae; glumis purpureiscentibus v. violascentibus, basi plus minusve viridibus apiceque plus minusve, saepius breviter, hyalinis, acutis integris scariosulo-rigidulis nitentibus, lanceolatis, 3-nerviis, infera (8 mm long.=1,15 mm long.) superam (7-7,5 mm long. 1,25-1,30 mm lat.) vix superante; flosculis teretifusoides (cum anthopodio et arista 13-14 mm long.=cum anthopodio sine arista 4,5-5 mm long.=sine anthopodio et arista 4-4,5 mm long.=0,5-0,75 mm diam.) utrinque breviter leniterque attenuatis, glumella infera submembranacea pallida, densiuscule longiusculeque albo-villosa, pilis apicem versus sensim elongatis (2-3 mm long.) exaratis sat numerosis pappum flosculi longitudine valde brevioribus albidum simulantibus, glumella supera pusilla subimperspicua hynlina glabra; anthopodio brevi obconico acuto (0,3-0,5 mm long.) densiuscule adpresseque albo-hirsuto.

Arista crassiuscula purpurascens non caduca (7-9 mm long.) rigidula eximie 2-geniculata, genu infero ad quartum, supero ad medium sitis, sub geniculis torta ac adpresse dense breviterque pubescens. Articulatio aristae cum glumella, imperspicua, non incrassata nec marginata, pilis obscondita.

28. *Stipa caudata* Trin.

Stipa caudata Trin., Act. Petrop., ser. I³, p. 75 (1829).



28. *Stipa caudata* Trin.

a. Spicula $\frac{1}{4}$

b. Flosculus $\frac{1}{4}$

c. Flosculus $\frac{5}{4}$

Diag. Glumae lanceolatae, flosculo subduplo longiores, 3-nerves hyalinae v. \pm purpurascens; flosculus subfusoides laxè pubescens, pilis albis sursum sensim elongatis atque subpappose expansis, flosculi longitudinem dimidiam vix superantibus; anthopodium acutum dimidium flosculi diametrum vix attingens, albo-villosum; arista subpersistens flosculo 5-6-plo longior. Culmi graciles folia e

setaceo subjuncoidea laevia non v. vix superantes; panícula angusta elongata subspiciformis.

Hab. Non rara in aridis secus *Rio Negro* et *Rio Colorado*, Patagoniae borealis nec non in parte australiorae prov. *Buenos Aires*, per ann. 1895-1900.

Obs. Perennis fasciculato-caespitosa.

Culmi folia aequantes v. vix superantes, sat robusti (400-900 mm alt.=1-2,5 mm diam.) glabri laeves, ad apicem usque vestiti, nodis saepius absconditis tumidulis glabris fuscescentibusque.

Folia omnia isomorpha dense caespitosa, viridia v. obsolete subglaucescentia, rigida, duriuscula, limbis complicato-teretibus (100-500 mm long.=0,5-1 mm lat.) erectis, apice acute attenuato-mucronatis pungentibus, extus longitrorsum obsolete leniter striatis non scabris glabris, sed ad conniventiam marginum, in juventute praecipue, pilis nonnullis remotissimis tenuibus mollibus, per aetatem evanescentibus, patentibus parum perspicuis adpersis, intus

subcinerascensibus 3-5-costulato-nervosis, vaginis pallescentibus arcte adpressis glabris, substriatis, ore abrupte coarctatis, auriculis longe denseque barbato-villosis, ligulis serie transversa pilorum longiusculorum constitutis.

Inflorescentia angusta subspicata (150-300 mm long.) continua v. plus minusve interrupta, subsecunda erecta, deorsum vagina folii supremi leniter inflata plus minusve amplexa, rachi vix scabra, ramis pedicellisque (1-8 mm long.) subtrigonis scaberulis superne leniter sensimque incrassatis.

Spiculae confertiusculae erectae adpressae; glumis subhyalinis v. violascentibus, apice excepto hyalino, glabris nitentibus, lanceolatis attenuato-acuminatis, villis flosculorum longioribus, 3-nervibus, carinatis, infera (9 mm long.=1,25-1,50 mm lat.) superam (8-8,25 mm long.=1,25 mm lat.) parum superante; flosculis tereti-fusoideis (cum anthopodio et arista 23-35 mm long.=cum anthopodio sine arista 4-5 mm long.=sine anthopodio et arista 3,75-4,50 mm long.=0,5-0,8 mm lat.), deorsum breviter leniterque angustatis, sursum longius validiusque attenuatis, glumella infera vix coriacea pallida laxe breviter adpresseque pilosa, antice longiuscule villososubpapposa, pilis rectis (2-3 mm long.) albis, glumella supera aequilonga (3,50-4,25 mm long.) rigidula opaca, apice praecipue villosula obsolete 2-nervi non carinata nec sulcata; anthopodio conoideo acuto (0,30-0,40 mm long.) dense breviterque villosulo.

Arista tenuis non v. aegre caduca (19-31 mm long.) rigidula scabra, infra medium 2-geniculata, genu infimo subobsoleto, parte suprema recta, reliquam partem inferam (flosculo addito) parum superante. Articulatio aristae cum glumella eximia, etsi pappo cincta,

sat perspicua nervoso-annuliformis pilis erectis armata. Species incolis saepius sub nomine «*Pasto amargo*» cognita.

a/ Ex *Carmen de Patagones*, Febr. 1898 (C. S.).

b/ Ex *Fortin Mercedes*, Rio Colorado, Febr. 1898 (C. S.).

c/ Ex *Bahía Blanca*, Jan 1898 et Dec. 1899 (C. S.).

d/ Ex *Sierra de la Ventana*, Nov. 1895 (C. S.).

e/ Ex *Estación Tornquist*, Dec. 1899 (C. S.).

VI. *DASYSTIPA* Speg.

Char. Glumae flosculo longiores; flosculus lanceolatus v. fusoides semper totus pubescens apice glabratus v. minutissime ciliolatus glumellae inferae margine altero externo alterum internum obtegente; glumella supra \pm ve evoluta plana enervis v. obsolete nervosa; anthopodium acutum diametrum flosculi non superans; corona nulla v. obsoleta rudimentaria; arista nuda saepius tenuis persistens v. decidua, \pm geniculata ac torta.

29. *Stipa brachychaeta* Godr.



29. *Stipa brachychaeta* Godr.

a. Spicula $\frac{1}{4}$ f. major

b. Flosculus $\frac{1}{4}$ „ „

c. Spicula $\frac{1}{4}$ f. minor

d. Flosculus $\frac{1}{4}$ „ „

e. Flosculus $\frac{1}{4}$

Stipa brachychaeta Godr., Mém. montp., sect. med., I, p. 448 (1858).

Stipa Lorentziana Grisb., Symb. ad Fl. arg., p. 298, n. 1903 (1879)!

Stipa eminens Cav. β *micrantha* OK. Rev. gen. plant. III, 2, p. 371.

Diag. Glumae lanceolatae, flosculo sat longiores 1-3-nerves, hyalinae v. virescenti-purpurascens; flosculus fusoides non v. vix e latere compressus et subglabratus, dorso ventrique breviter adpresseque pubescens; anthopodium diametrum flosculi non

v. vix aequans villosum; corona nulla; arista subpersistens flosculo 2-3-plo longior. Culmi folia convoluta laevia non v. parum superantes, panícula angusta elongata, subspiciformis.

Hab. Vulgata in planitie pampeana praecipue in locis siccioribus prov. *Buenos Aires, Santa Fé, Pampa Central, S. Luis, Córdoba, Entreríos, Tucumán, Salta*, nec non in *Montevideo*, per ann. 1880-1900.

Obs. Perennis, fasciculato-caespitosa.

Culmi folia aequantes v. parum superantes set robusti (400-1000 mm alt.=0,5-2 mm diam.) glabri laeves, ad apicem usque saepius vestiti, nodis fere semper absconditis, non v. vix incrassatis atque subfuscentibus glabris.

Folia omnia isomorpha, dense caespitosa, viridia v. obselete glaucescentia, rigida dura limbis udis planiusculo-canaliculatis, siccis plus minusve laxe convolutis erectis (100-700 mm alt.=apert. 2-6 mm lat.=involut. 0,5-1,5 mm diám.) ápice longe attenuato-subulatis non v. parce pungentibus, extus eximie longitrorsum sulcato-striatis non scabris, sed ad margines, in juventute praecipue, polii nonnullis remotis tenuibus mollibus patentibus, per aetatem saepius evanescentibus, adpersis, intus glaucis 5-11-sulcato-costulatis, glabris, non scabris, vaginis pallescentibus arete adpressis glabris, striatulis, ore abruptiuscule angustato-coarctatis, auriculis longe denseque barbato-villosis, ligulis membranaceis angustissimis fimbriato-villosis v. serie transversa pilorum constitutis.

Inflorescentia spicata v. spicato-subpaniculata (100-250 mm long.) laxa inferne interrupta primo erecta dein plus minusve patula et subnutans, basi nuda v. vagina folii supremi non v. modice inflata vestita, rachi laevi v. vix subscabrida, ramis pedicellisque (2-15 mm long.) gracilibus scabriusculis glabris v. sparse parceque pilosis, apice vix incrassatulis.

Spiculae laxiusculae crectae v. patulae, glumis e hyalino vire-scentibus v. plus minusve purpurascentibus, lanceolatis subaequilongis, carinatulis, breviter acuminato-attenuatis non v. vix mucronato-aristulatis, flosculos parum superantibus, infera 1-3-nervi (6-9 mm long.=1,25-1,50 mm lat.) superam (5,75-8 mm long.=1,30-1,75 mm lat.) 3-nervem vix superante; flosculis fusoides teretibus v. e latere subcompressulis (cum anthopodio et arista 16-23 mm long.=cum anthopodio sine arista 4,50-6 mm long.=sine anthopodio et arista 4,25-5,75 mm long.=0,75-1,15 mm diam.), glumella infera vix coriacea pallida, dorso et ventre laxe breviter adpressequ pilosula (lateribus glabris v. subglabratis); glumella supera parum brevior (4,25-5,50 mm long.) rigidula opaca pubescente, binervi non carinata nec sulcata; anthopodio conoideo (0,20-0,30 mm long.) dense breviterque albo-villoso.

Arista subcrassiuscula non v. aegre caduca (11-17 mm long.) rigidula nuda scabriuscula, infra medium obsolete 2-geniculata, genu infimo subobsoleto, parte suprema recta reliquam partem inferam, flosculo addito, leniter brevior. Articulatio glumellae cum arista eximia, sed parum perspicua, vix nervoso-annuliformis, pilis brevibus adpressis paucis ornata.

Hujus speciei formae duae sequentes distinguendae:

a) minor Speg. culmis folia longe superantibus gracilibus (400-500 mm alt.); foliis semper plus minusve convoluto-setaceis (0,5-1 mm diam.), panicula angusta depauperata (100-150 mm long.) basi longe nuda; glumis e hyalino purpurascentibus, infera 1 nervi v. sub-3-nervi, nervis lateralibus vix evolutis (6-6,25 mm long.=1,25-1,30 mm lat.), supera 3-nervi (5,75-6 mm long.=1,30-1,50 mm lat.), flosculis parum compressulis subteretibus, fere ubique aequaliter pubescentibus (cum anthopodio sine arista 4,50-5 mm long.=0,75-0,90 mm diam.), arista subtenui (10-15 mm long.), pilis articulationis sat numerosis saepius longiusculis.

Adest in locis siccioribus saxosis v. sabulosis.

b) major Speg. culmis folia non v. vix superantibus validi (500-

900 mm alt.); foliis plerumque planis latis (2-5 mm lat.); panicula magna confertiuscula (200-250 mm long.) basi vaginata; glumis hyalino-virescentibus, 3-nervibus (6-9 mm long., = 1,25-1,75 mm lat.); floeculis valide compressis, lateribus glabratis (cum anthopodio et corona 5-6 mm long., = 1,25 mm diam.) arista crassiuscula (15-17 mm long.) pilis articulationis paucis brevissimis; floribus radicalibus semper nullis.

Viget in pratis editioribus.

In basi caespitum formae *minoris* adsunt saepe inflorescentiae radicales, vaginis relaxatis involutis, noduloso-constipatae, glumis ovato-lanceolatis hyalinis, non v. obsolete 1-2-3-nervibus subaequilongis (6-8 mm long.), infera conspicue angustiore; glumellis ovato-lanceolatis, infera apice bidentata, nervo in mucrone brevi v. longiusculo (0-2 mm long.) excurrente, supera lanceolata inermi, cariopside ovata v. elliptica plus minusve tetragona dura glabra facile a glumellis soluta, fuscidula.

Specimina inspecta collecta fuerunt:

- a/ In vallibus *Sierra Ventana*, Nov. 1895 (C. S.).
- b/ Prope *Sierra de Curamalal*, Dec. 1899 (C. S.).
- c/ In *Sierra Tandil*, Mart. 1892 (C. S.).
- d/ Prope *Estación Dennehy*, Nov. 1898 (C. S.).
- e/ Prope *La Plata*, per ann. 1885-1899 (C. S.).
- f/ In *Buenos Aires*, April 1900 (C. S.).
- g/ Prope *Baradero*, Nov. 1898 (B. Chaves).
- h/ Prope *Rosario de Santa Fe*, Jan. 1896 (C. S.).

30. *Stipa hystericina* Speg., n. sp.30. *Stipa hystericina* Speg.a. Spicula $\frac{1}{2}$ b. Flosculus $\frac{1}{2}$ c. Flosculus $\frac{2}{3}$

Diag. Glumae anguste lineares, flosculo parum longiores, 1-nerves, e hyalino subpurpurascens; flosculus lineari-lanceolatus, laxè minuteque pubescens; anthopodium conoideum flosculi diametro 2-3-plo brevius, glabrum; corona nulla; arista sub decidua flosculo 3-4-plo longior, basi pilis nonnullis cincta. Culmi sat robusti, folia setacea v. juncoidea breviuscula nitentiuscula laevia pungentissima superantes; panícula angusta spiciformis, vaginata.

Hab. Rara in alpinis aridissimis, *Cuesta de la Tronera* inter *Isonza* et *Cachu-pampa* (3750 mtr. alt.), prov. Salta, Jan. 1897.

Obs. Perennis fasciculato-caespitosa.

Culmi folia superantes sat robusti (150-200 mm alt.=0,75-125 mm crass.) late fistulosi, minute longitrorsum striati, glaberrimi non scabri ad apicem usque foliati, erecti, recti, nodis non incrassatis annulato-constrictulis concoloribus glabris.

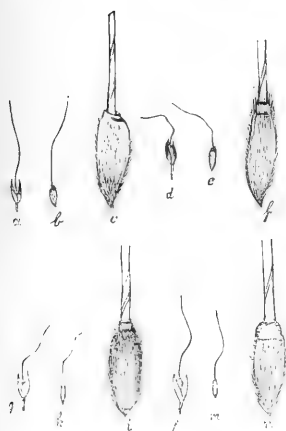
Folia omnia isomorpha constipata flavido-virescentia, juncea, rigida, limbis complicatis e latere compressis v. obsolete subteretibus, saepe tortis, laevissimis, nitentiusculis non v. obsoletissime dorso scaberulis (15-100 mm long.=0,75-1 mm diam. maj.=apert. 1,5-2 mm lat.) intus subcinerascentibus, tenuiter 7-11-costulato-sulcatis, subpulverulento-scaberulis, apice breviter rigide pallideque mucronato-pungentibus, vaginis pallidis laevibus glabris, margine saepius longe villosis, ore abrupte contractis, auriculis villosio-barbatis, ligulis obsoletis, ad seriem transversam densam pilorum reductis.

Inflorescentia angustissime spicata brevis (50-100 mm long.=5-10 mm lat.) contracta, erecta in vagina folii supremi sat inflata plus minusve abscondita, rachi laevis, ramis pedicellisque erectis adpressis compressulis scabriusculis, apice non v. vix incrassatis.

Spiculae constipatae; glumis hyalinis v. leniter violascentibus, carinatis anguste linearibus 1-nerviis aequilongis (5,50-6 mm long.=0,50-0,75 mm lat.) apice breviter attenuato-subaristulatis, flosculos parum superantibus; flosculis teretibus anguste lineari-lanceolatis (cum anthopodio et arista 19-20 mm long.=cum anthopodio sine arista 4-4,5 mm long.=0,5 mm diam.) sursum longius attenuatis, glumella infera tenui membranaceo-subhyalina, per aetatem vix rigidula et subfuscescente, minute laxe adpresseque pilosula, glumella supera quadruplo brevior obtusiuscula glabra hyalina nervi, anthopodio brevissimo (0,15 mm long.) subconoideo atque subobtusiusculo glaberrimo.

Arista tenuis sat facile caduca (14-15 mm long.) non v. obsoletissime torto-geniculata, tota nuda, vix scabriuscula. Articulatio aristae cum glumella vix perspicua v. vix tenuiter nervoso-annuliformis, pilis adpressis subpenicillatis ornata.

Species *St. leptostachyae* Gr. valde affinis, a *St. ichu* (R. & P.) Kuth., anthopodio glabrato longius abhorrens, foliis juncis compressis crassioribus, rigido-pungentibus nec non flosculis apice non v. obsoletissime piloso-subpenicillatis acute distinguenda.

31. *Stipa caespitosa* (Gris.) Speg.31. *Stipa caespitosa* (Gr.) Speg.a. Spicula $\frac{1}{2}$ var. typica.b. Flosculus $\frac{1}{2}$ » »c. Flosculus $\frac{1}{2}$ » »d. Spicula $\frac{1}{2}$ » subtypica.e. Flosculus $\frac{1}{2}$ » »f. Flosculus $\frac{1}{2}$ » »g. Spicula $\frac{1}{2}$ » elatah. Flosculus $\frac{1}{2}$ » »i. Flosculus $\frac{1}{2}$ » »l. Spicula $\frac{1}{2}$ » subelatam. Flosculus $\frac{1}{2}$ » »n. Flosculus $\frac{1}{2}$ » »

Nassella caespitosa Grisb., Plant. Lorentz., p. 210, n. 788 (1874) = Symb. Fl. Arg., p. 298, n. 1900 (1879)!

Diag. Glumae elliptico-lanceolatae, flosculo paulo longiores, 3-nerves, e hyalino viridi-purpurascentes; flosculus fusoides v. subclavulatus, pubescens; anthopodium acutiusculum flosculo 3-4-plo brevius villosum; corona nulla v. obsoleta v. pusilla callosa pallescens obtusa; arista caduca tenuis flosculo 2-3-plo longior. Culmi graciles folia convoluta v. plana scabra plus minusve superantes, panicula contracta v. relaxata et patula.

Hab. In pratis montanis et alpinis prov. Tucuman, Salta, Jujui, Puna Atacama, etc., per anno 1873-1900.

Obs. Perennis, laxa v. dense caespitosa, caespitibus mediocribus (100-225 mm alt. et diam.).

Culmi folia non v. longe superantes graciles (150-750 mm alt. = 0,5-1,25 mm diam.), medio fistulosi, extremitates versus meduloso-farcti, laevissimi glaberrimi non scabri, quandoque superne plus minusve longe denudati, 1-3-nodi, nodis leniter incrassatis saepius fusciscentibus glabris v. obsolete pubescentibus.

Folia omnia isomorpha v. subdimorpha, viridia v. subglaucescentia herbacea flaccida v. plus minusve subrigidula, limbis radicalibus et juvenilibus et semper e setaceo convolutis (25-200 mm long.=0,5-1 mm diam.), culmigenis in vivo planiusculis (1,5-5 mm lat.) in sicco laxe convolutis, apice sensim attenuato-subulatis acutissimis non v. vix subpungentibus, longitrorsum utrinque tenuiter striato-costulatis (nervis 7-21, omnibus aequicrassis v. centrali vix crassiore) dorso non carinatis, extus glabris v. tenuissime laxequae pulverulento-subpubescentibus, scabris v. scaberrimis, intus non v. vix subscabriusculis, margine saepe subpectinato-ciliolatis, vaginis pallidioribus subrelaxatulis striatulis glabris v. tenuissime subpulverulento-puberulis non scabris ore contractis auriculis non v. plus minusve pilosulo-barbatis, ligulis marginiformibus truncatis v. subovatis obtusis e hyalino subscariosis, denticulato-fissis, glaberrimis.

Inflorescentia (50-250 mm long.) primo linearis angusta vagina folii supremi non v. plus minusve inflata vestita, dein exerta, quandoque semper coarctata brevis, quandoque elongata relaxata patentiuscula subnutans, rachi laevi, ramis saepius ternatis brevibus erectis a basi pedicelligeris v. elongatis nutantibus a medio v. ultra tantum pedicelligeris, non v. vix scabridis, pedicellis adpressis (1-10 mm long.) angulosis scabris, sursum vix incrassatulis.

Spiculae confertiusculae v. subrelaxatae, semper tamen ramulis adpressae; glumis subherbaceis deorsum virescentibus sursum plus minusve hyalinis saepeque purpureo-maculatis, elliptico-lanceolatis nitentiusculis, flosculos parum superantibus, non v. obsolete subcarinatulis 3-nervibus, superne breviter angustatis apice obtusiuscule acutatis non aristulatis subaequilongis, infera (4-5,5 mm long.=1,25-1,50 mm lat.) superam (4-5 mm long.=1,15-1,25 mm lat.) vix v. non superante; flosculis teretibus v. leniter clavulatis (cum anthopodio et arista 5-16 mm long.=cum anthopodio sine arista 2-4 mm long.=sine anthopodio et arista 1,75-3,80 mm long.=0,5-1 mm diam.), glumella infera primo albida tenui dein coriace-

la fusca v. subatra non v. obsoletissime (sub lente validissima ad naturitatem) scabriuscula ubique et semper adpresse albo-pilosa, superne brevissime angustata v. rotundata, deorsum sensim attenuato-subturbinata, glumella supera pusilla (0,5-0,75 mm long.) anguste lanceolata hyalina enervi glabra, anthopodio pusillo obconoideo (0,20-0,30 mm long.) dense adpresseque albo-villoso.

Arista tenuis facillime, ad naturitatem praecipue, caduca (5-15 mm long.) pallida v. purpurascens, nuda, scaberula, 2-geniculata, geniculo supero ad medium v. parum infra, infero ad quartum posticum. Articulatio glumellae cum arista eximia sed in forvola calli coronarii abscondita.

Corona, quandoque absolute nulla, glumella apice obliqua obtusissima vix calloso-pallescente umbilicatula, quandoque evoluta pusilla conoidea et cum glumella continua v. cylindraceo-annuliformis pallida glabra non v. saepe pilis glumellae, ipsam superantibus plus minusve abscondita.

Species pulchella sed valde variabilis; varietates nobiliores distinguendae sunt:

a) typica Speg.: culmis folia breviter superantibus, foliis dense fasciculato-caespitosis convoluto-setaceis glabris, subrigidulis atque sub glaucescentibus, inflorescentia brevis angusta, spiculis confertis, glumis plus minusve purpureo-tinctis (4 mm long.), flosculis obclavatulis superne obtusissimis obliquis umbilicatis callosis (2,75 mm long.=0,75 mm diam.), aristis (5-8 mm long.) brevibus.

b) subtypica Speg.: culmis et foliis, margine ciliolatis, flaccidulis viridibus ut in var. typica; paniculis elongatis saepius angustissime linearibus valde depauperatis, spiculis remotis, glumis saepius atropurpureis (5 mm long.), flosculis e terete fusoideis, apice eximie minuteque annulato-coronulatis (4 mm long.=0,50 mm diam.); aristis (5-10 mm long.) brevibus.

c) elata Speg.: culmis folia omnia convoluto-subsetacea, ut in typo, longissime superantibus; paniculis elongatis depauperatis, ra-

mis geminatis v. ternatis remotissimis patentibus nutantibus, spiculis relaxatis, glumis purpureo-maculatis (5,5 mm long.); flosculis clavulatis obsolete subtetragonis, ad angulos villosis, in faciebus subglabratis, superne obtuses breviterque conoideo-callosis (4 mm long. = 0,75-1 mm diam.); aristis (12-15 mm long.) longiusculis.

d) *subelata* Speg.: culmis folia longe superantibus; foliis radicalibus subsetaceo-convolutis, culmicolis planis, viridibus; paniculis depauperatis, ramis elongatis geminatis v. ternatis remotissimis patentibus nutantibusque; glumis viridibus (4 mm long.), flosculis leniter clavulatis teretibus, superne breviter attenuato-rotundatis ac conoideo-callosis (2,25-2,50 mm long. = 0,50-0,70 mm diam.); aristis (8-12 mm long.) mediocribus.

Specimina inspecta sunt:

a/ In *Nevado del Castillo*, prov. Salta Mart. 1873 (Lorentz et Hiern., n. 185).

b/ In *Nevado de Cachi*, prov. Salta Febr. 1897 (C. S.).

c/ In *Puna de Atacama*, Febr. 1900 (E. Holmberg).

d/ In pratis *Pampa Grande*, prov. Salta, Jan. 1897 (C. S.)

32. *Stipa uspallatensis* Speg., n. sp.



32. *Stipa uspallatensis* Speg.

a. Spicula $\frac{1}{2}$.

b. Flosculus $\frac{1}{2}$.

c. Flosculus $\frac{1}{2}$.

Diag. Glumae oblongae flosculum vix superantes 5-3-nerves e virescente violascentes; flosculus subfusioideus pilosulus; anthopodium flosculi diametro tertio brevius acutum villosulum; corona obsolete callosa-marginiformis ciliolata; arista persistens crassiuscula flosculo duplo longior. Culmi graciles folia setacea rigida obscurida superantes; panicula angustissime linearis depauperata, saepius vaginata.

Hub. In alpinis *Cerro de los Cordobeses* et *Cerro Ximenes* prope *Paramillo de Uspallata* (2500-3000 mtr. alt.), Jan. 1896 (C. S.)

Obs. Perennis, caespitibus parvis densis rigidis pungentibus subflavescentibus (50-80 mm alt. et diam.).

Culmi pauci folia plus minusve superantes (80-200 mm alt.=0,5-0,6 mm diam.) glabri laeves, ad apicem usque foliati erecti recti v. arcuati, nodis non incrassatis leniter fuscescentibus glabris.

Folia omnia isomorpha constipata plus minusve flavescentia v. leniter subglaucescentia, rigida, limbis complicato-teretibus rectis v. saepius falcatis (10-40 mm long.=0,5-0,6 mm diam.) glabris non v. obsoletissime scabridis pulverulentis et longitrorsum sulcatis, intus subcinerascentibus pubescentibusque, 3-5-striato-costulatis, apice abrupte acutato-mucronatis pungentibusque, vaginis adpressis pallidioribus glabris v. vix pulverulentis, ore rotundato-coarctatis, auriculis parce pubescenti-barbatulis, ligulis anguste marginiformibus minute fimbriato-ciliolatis.

Inflorescentia angustissime spicata (40-80 mm long.=3-4 mm lat.) pauperrima, erectiuscula, semper linearis, basi vagina folii supremi spathacco-inflata plus minusve vestita, rachi ramis pedicellisque (1-10 mm long.) angulosis glabris laevibus erectis adpressis.

Spiculae laxae, semper erectae adpressae; glumis violascentibus, dorso prope basin et apice saepius virescentibus v. hyalinis, oblongis, non v. obsolete carinatis, nitentibus, superne breviter subobtusaeque acutatis non aristulatis, infera 5-nervi (8-9 mm long.=1,75-1,85 mm lat.) superam 3-nervem (7,50-8,50 mm long.=1,40-1,60 mm lat.) parum superante; flosculis e terete obsoletissime fusoideis e latere non v. leniter compressulis (cum anthopodio et arista 16-18 mm long.=cum anthopodio sine arista 5,50-6 mm long.=0,75-1 mm diam.) utrimque breviter lenissimeque angustatis, glumella infera vix coriacea pallida pilis laxis adpressis albis mollibus apicem ipsius superantibus adpersa, supera pusilla hyalina enervi (1,5 mm long.=0,3-0,4 mm lat.) obtusa glabra; anthopodio turbinato-

obconico brevi crasso acuto (0,50-0,75 mm long.) dense breviterque albo-pubescente.

Arista crassiuscula rigidula non caduca (10-14 mm long.) plus minusve 2-geniculata, geniculo supero ad medium v. paulo infra, infero ad quartum posticum sitis, deorsum parce subpubescenti-pilosula torta, sursum erecta nuda vix scabrida saepius purpureascens. Articulatio aristae cum glumella eximia.

Corona parum manifesta angustissime calloso-marginiformis pallida acie obtusa glabra v. ciliolata, in parte ventrali plus minusve interrupta, dorso praecipue coarctatione obsoleta a glumella limitata.

Species certe *St. longifoliae* Ph. nec non *St. amphicarphae* Ph. valde affinis.

33. *Stipa baviocensis* Speg., n. sp.



33. *Stipa baviocensis* Speg.

a. Spicula $\frac{1}{2}$

b. Flosculus $\frac{1}{2}$

c. Flosculus $\frac{1}{2}$

(*Diag.* Glumae anguste lanceolatae flosculum sat superantes, 1-3-nerves, e hyalino violascentes; flosculus subfusoides subtetragonus pilosulus fuscus; anthopodium acutum diametrum flosculi dimidium aequans villosum; corona pusilla subcylindracea callosa pallida, ciliolata; arista flosculo 6-8-plo longior. Culmi folia laxa convoluta laevia pluries superantes, panicula diffusa valde relaxata nutans.

Hab. Non rara in pratis editioribus prope *Estación Bavio* inter *La Plata* et *La Magdalena*, prov. de B. Aires, Oct. 1897 et Jun. 1899 et prope *Estación Brandzen*, Jan. 1901 (C. S.).

Obs. Perennis, caespitibus parvis (50-250 mm alt. et diam.) laxis subglauescenti-virescentibus.

Culmi numerosissimi folia duplo v. quadruplo superantes (300-600 mm alt.=0,50-1 mm diam.) glabri laeves, ad apicem usque laxè foliati, erecti, nodis incrassatulis fuscescentibus glabris.

Folia subisomorpha, radicalia quam culmigena angustiora laxa herbacea subrigidula, viridia v. leniter glaucescentia, limbis in vivo planis in sicco convolutis (15-200 mm long.=1-3 mm lat.) sursum longe sensimque attenuatis convolutisque, apice callosis acutissimis pallidis sed non pungentibus, longitrorsum utrimque tenuiter striato-costulatis (nervis 5-13) glabris non scabris, vaginis vix pallidioribus adpressis striatulis glabris ore truncatis, auriculis parce pubescenti-barbatis, ligulis angustissime marginiformibus subobsoletis scariosulis, fissis v. denticulatis.

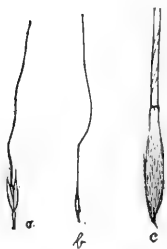
Inflorescentia paniculata v. subspicata primo vix secunda dein plus minusve expansa valde relaxata nutans (50-250 mm long.=5-25 mm diam.) basi folii supremi vagina plus minusve vestita, rachi terete laevissima, ramis et pedicellis (1-5 mm long.) angulosis vix scabridis, sursum leniter incrassato-subclavulatis.

Spiculae in ramis parum confertae, primo erectae adpressulae dein patulae nutantesque; glumis violascentibus apice plus minusve hyalinis, superne longiuscule attenuatis atque breviter aristulatis, infera 1-nervi (5-8 mm long.=1,25-1,50 mm lat.) superam 3-nervem (4,50-6 mm long.=1-1,25 mm lat.) paulo superante; flosculis e subtetragono teretibus lenissime fusoides (cum anthopodio et arista 25-36 mm long.=cum anthopodio sine arista 3,5-4,5 mm long.=0,60-0,65 mm diam.) utrimque breviter leniterque angustatis, glumella infera subrigidula primo alba dein purpurascente, laxiuscule breviter adpresseque albo-pilosula, supera pusillima vix perspicua (0,15-0,25 mm long.) hyalina enervi glabra; anthopodio rigidulo pallido acuto (0,35-0,55 mm long.) adpresse albo-pubescente.

Arista tenuis fuscescens persistens (20-32 mm long.) nuda vix scabriuscula, 2-geniculata, geniculo infero ad quintum posticum, supero sat infra medium sitis, parte suprema recta aristae reliquam inferam, flosculo addito, paulo superante. Articulatio glumellae cum arista coronula cincta.

Corona pusilla albescens e cylindraceo subturbinata, margine callosa obtusiuscula non v. obsolete subciliolata.

34. *Stipa filifolia* Nees.



34. *Stipa filifolia* Nees

- a. Spicula $\frac{1}{2}$
- b. Flosculus $\frac{1}{2}$
- c. Flosculus $\frac{5}{8}$

Stipa filifolia Nees ab Esenb., Agrost. bras., p. 379 (1829). = Arech., Las gram. urug. p. 262, n. 6 (1894)! = OK., Rev. gen. plant. III, 2, p. 371 (1898)!

Diag. Glumae lineari-lanceolatae flosculo subduplo longiores, 1-sub-3-nerves, hyalinae; flosculus subfusioideus obsolete subpilosulus; corona nulla; anthopodium flosculi diametro subduplo longius, albo-villosum; arista persistens 7-9-plo flosculo longior, infra medium obsolete geniculata. Culmi folia capillacea scabrida aequantes v. parum superantes; panicula angustissime linearis semper compactissima subnuda.

Hab. In collinis saxosis prope *Montevideo* (J. Arechavaleta) et in *Sierra del Tandil* Dec. 1891 (OK.), nec non in *Sierra de Balcarce*, Jan. 1894 (C. S.).

Obs. Perennis dense caespitosa, caespitibus majusculis (350-600 mm alt. = 150-350 mm diam.).

Culmi folia aequantes v. superantes (400-800 mm alt. = 1-2 mm

diam.) teretes glabri, non scabri non striati, remote 2-3-foliati, nodis non v. vix incrassatulis glabris, anguste annulato-fuscescentibus.

Folia omnia isomorpha, pallide viridi-flavescentia rigida, limbis capillaceis e complicato subulatis ventre obsolete imperspicueque canaliculatis (200-500 mm long.=0,3-0,5 mm diam.) rigidis erectis glaberrimis scabris sursum sensim attenuatis apiceque acutissimis pungentibusque, vaginis infimis relaxatis, superis adpressis, pallidioribus glaberrimis, vix tenuissime striolatis, ore abrupte coarctatis non barbatis, auriculis cum ligulis (radicalibus brevissimis) ovatis saepius obliquis obtusis non v. vix denticulatis scariosulis albescenti-subhyalinis continuis.

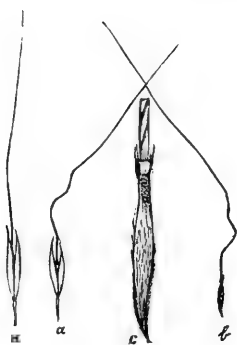
Inflorescentia majuscula lineari-spiciformis densissima (150-250 mm long.=7-12 mm diam.) non v. vix ima basi interrupta deorsum saepius nuda, erecta v. vix leniter secunda, rachi terete scabriuscula, ramis alternis confertis erectis adpressis subbrevisculis scabris a basi pedicelligeris, pedicellis (0-5 mm long.) tenuibus angulosis scabridis apice non v. vix subincrassatulis.

Spiculae confertissimae semper erectae adpressissimae; glumis anguste lineari-lanceolatis, hyalinis sursum longe attenuatis acuminatissimis sed non aristulatis, glabris nitentiusculis, flosculo subduplo longioribus non carinatis, infera tenuiter 1-nervi (7-8 mm long.=0,6-0,75 mm lat.) superam obsolete 3-nervem (6-7,25 mm long.=0,5-0,6 mm lat.) sat superante; flosculis terete-fusoideis (cum anthopodio et arista 28-32 mm long.=cum anthopodio sine arista 2,75-2,80 mm long.=0,35-0,40 mm diam.), non v. lenissime subcompressulis, glumella infera tenui subyalina, laxè adpresse minute obsoleteque pilosula, sursum longiuscule attenuato-subrostrata, cum arista continua, deorsum breviter angustata; glumella supera pusilla (1 mm long.) anguste elliptica mucronulata hyalina enervi glabra; anthopodio tenui e terete subconoideo pro ratione longiusculo (0,5-0,6 mm long.) acuto, adpresse densiusculeque albo-pilosulo.

Arista tenuis rigidiuscula (25-30 mm long.) persistens, scaberula nuda obsoletissime 2-geniculata, geniculo superno ad medium v. parum infra, infero ad tertium posticum sitis, non v. vix torta; articulatio aristae cum glumella nuda, vix annulatum nervoso-noduliformis.

Corona plane nulla.

35. *Stipa megapotamica* Sprng.



35. *Stipa megapotamica* Sprng.

a. Spicula $\frac{1}{4}$.

b. Flosculus $\frac{1}{4}$.

c. Flosculus $\frac{1}{4}$.

Stipa megapotamica Spreng., Trin., Act. petr. 1, p. 77 (1831). = Arech., Las gram. urug. p. 263, n. 7 (1894)!

Stipa juncoides Speg., Contr. Flor. Ventana, p. 68, n. 313.

Diag. Glumae lineari-lanceolatae, flosculo subduplo longiores, tenuiter 3-5-nerves, hyalinae; flosculus subfusioideus superne glaber, inferne obsolete pilosulus; corona nulla; anthopodium diametro flosculi 3-plo longius, albo-villosum; arista persistens 9-12-plo flosculo longior, infra tertium infimum geniculata. Culmi folia

setaceo-juncoidea laevia aequantes v. parum superantes; panicula linearis angusta subrelaxata v. interrupta.

Hab. In collinis prope Montevideo (J. Arechavaleta), in Sierra del Tandil, Dec. 1891 (OK.) et in Sierra de la Ventana et de Curámalal, Nov. 1895 et Dec. 1899 (C. S.).

Obs. Perennis dense caespitosa, caespitibus parvis v. majusculis (50-250 mm alt. et diam.).

Culmi folia aequantes v. plus minusve superantes (200-600 mm alt.=0,75-1,25 mm diam.) fistulosi teretes glabri non scabri, obsolete longitrorsum striati, remote 2-3-foliati, nodis vix incrassatulis annulatim leniter constrictis ac ferrugineis.

Folia omnia isomorpha, pallide virescentia v. flavescentia, limbis setaceo-juncoideis e complicato subulatis ventre non v. vix angustissime obsoleteque (saepius imperspicue) canaliculatis (30-200 mm long.=0,4-0,75 mm diam.) rigidis erectis glaberrimis non scabris laevibus v. obsoletissime striatis, rectis v. leniter subspiraliter tortis, apice breviter acutissimeque attenuato-mucronatis pungentibusque, vaginis infimis relaxatis, ore abrupte truncato-coarctatis, auriculis glaberrimis cum ligulis (radicalibus nullis v. obsoletis) lanceolatis acutiusculis integris scariosulis albescenti-subhyalinis continuis.

Inflorescentia majuscula lineari-spiciformis sublaxiuscula (50-200 mm long.=5-15 mm diam.) continua v. saepius interrupta deorsum nuda v. breviter vaginata, secunda, ad maturitatem relaxato-patentiuscula, rachi terete non scabra, ramis alterne fasciculatis, remotiusculis erectiusculis v. subpatulis compressulis, in tertio infero nudis obsolete puberulo-scabridis, pedicellis (1-10 mm long.) tenuibus scabris, apice leniter incrassatulis.

Spiculae sublaxiusculae erectae v. patentiusculae; glumis anguste lineari-lanceolatis hyalinis sursum longe attenuatis acuminatissimis sed non aristulatis glabris, infera tenuiter 3-5-nervi (11-12 mm long.=1,35-1,50 mm lat.), nervis saepius dorso scabris, inferam 5-nervem (10-11 mm long.=1-1,15 mm lat.) parum superante; flosculis tereti-fusoideis (cum anthopodio et arista 50-85 mm long.=cum anthopodio sine arista 5-6,5 mm long.=sine anthopodio et arista 4-5 mm long.=0,35-0,75 mm diam.), glumella infera tenui subhyalina, in parte dimidia infera laxe adpresse minute obsoleteque pilosula, medio glabra, laevi, in tertio supremo minutissime

subimperspicueque scabriuscula, sursum longiuscule subrostrato-attenuata atque dorso saepius depresso-plicata, cum arista fere continua, deorsum breviter angustata; glumella supera pusilla (0,75-1 mm long.) ovato-elliptica obtusiuscula, hyalina enervi glabra; anthopodio tenui e terete subconoido pro ratione longiusculo (1-1,5 mm long.) acuto densiuscule adpresseque albo-pilosulo.

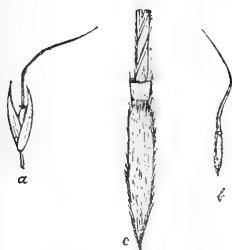
Arista tenuis rigidula (45-80 mm long.) persistens, scaberula nuda, obsolete 2-geniculata, geniculo supero ad tertium posticum, infero ad sextum infimum sitis, non v. vix torta; articulatio aristae cum glumella tenuiter annulato-noduliformis minutissime adpresseque ciliolata.

Corona nulla.

Varietates duae sat distinctae adsunt:

a) *typica* Speg.: foliis tenuibus valde elongatis (200-250 mm long. = 0,4-0,5 mm diam.), inflorescentia patentiuscula atque majuscula (150-200 mm long.), spiculis subminoribus, glumis 10-11 mm long., flosculo 5 mm long., arista 50-65 mm long. In regionibus calidioribus crescens.

b) *juncoides* (Speg.): foliis crassiusculis abbreviatis (50-150 mm long. = 0,5-0,75 mm diam.), spiculis majoribus, glumis 11-12 mm long., flosculo 6-6,5 mm long.; arista 70-85 mm long. In regionibus australioribus et frigidioribus occurrens.

36. *Stipa nubicola* Speg., n. sp.36. *Stipa nubicola* Speg.

- a. Spicula $\frac{1}{4}$
 b. Flosculus $\frac{1}{4}$
 c. Flosculus $\frac{1}{4}$

Diag. Glumae oblongae, flosculo duplo longiores, 3-5-nerves, violascentes; flosculus subfusoides pubescens; corona cylindracea basi obsolete constricta, acie denticulato-setulosa; anthopodium diametrum flosculi subduplo superans, villosum; arista persistens flosculo 3-4-plo longior, subglabra. Culmi folia ex applanato convoluta laevia saepius sat superantes; panicula primo angusta conferta, dein relaxata-patula.

Hab. In fissuris rupium in cacumine *Cuesta del Arca*, (3500 m alt.), nec non in *Nevado de Cachi* (5000 m alt.), aest. 1897 (C. S.).

Obs. Perennis caespitosa, caespitibus parvis densiusculis (50-150 mm alt. = 25-100 mm diam.).

Culmi pauci, folia saepius sat superantes (150-250 mm alt. = 1-1,25 mm diam.) fistulosi glabri laeves v. vix obsolete longitrorsum striatuli, ad apicem usque foliati, erecti, recti, 1-v. 2-nodi, nodis non incrassatis concoloribus glabris.

Folia subdimorpha in juventute teretia subulato-convoluta, per aetatem in vivo plus minusve aperto-applanatula, in sicco laxe convoluta, sordide viridia, limbis erectis rigidulis (30-100 mm long. = 0,5-0,75 mm diam. = 1,5-3 mm lat. apert.) glabris non scabris, dorso laevissimis v. vix obsolete striatis, ventre glaucescenti-pruinulosis tenuiter 7-11-striatulo-sulcatis, apice abrupte breviterque attenuato-acutatis non pungentibus, vaginis adpressis sordidis per

actatem in fibris solutis, glabris, ore truncato-coarctatis, auriculis non v. vix evolutis non barbatis, cum ligulis anguste marginiformibus scariosulis vix denticulatis glaberrimis continuis.

Inflorescentia anguste spicata (75-100 mm long.) pauci-(15-25) spiculigera, primo erecta dein leniter exarata, basi vagina folii supremi spathaeo-inflata plus minusve vestita, rachi tenui glabra sublaevi, ramis et pedicellis (3-15 mm long.) apice leniter clavulatis, scaberulis.

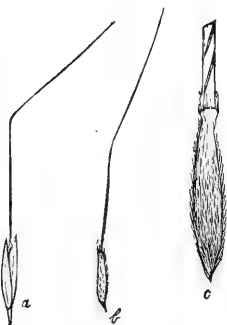
Spiculae relaxatulae erectae v. subpatentes; glumis primo adpressis dein post anthesin divaricatis, sordide violascentibus, leniter carinatis, ellipsoideo-linearibus, deorsum breviter leniterque, superne longiuscule attenuato-acuminatis, non v. vix submucronulatis, infera 3-nervi (13-14 mm long.=2,5 mm lat.) superam 5-nervem (12-13 mm long.=2 mm lat.) vix superante; flosculis e tereti lenissime subfusoides e latere non compressis (cum anthopodio et arista 32-35 mm long.=cum anthopodio et corona 6,75-7 mm long.=sine anthopodio et corona 4,5 mm long.=0,75-0,85 mm diam.) utrimque parum attenuatis, glumella infera submembranacea vix subcoriacea pallescente, pilis albidis subbrevis mollibus adpressis, coronam non v. vix obtegentibus, subdensiusculis ubique (margine externo angusto excepto) vestita; glumella supera dimidio brevior (1,5 mm long.=0,25 mm lat.) angusta subhyalina enervi glabra; anthopodio teretiusculo non v. vix turbinatulo rigidulo acuto pallido (1,25-1,50 mm long.=0,15-0,20 mm diam.) dense adpressequae villosulo.

Arista subcrassiuscula rigidula nuda subscaberula, non v. aegre caduca (25-30 mm long.) leniter 2-geniculata, geniculo supero parum infra medium, inferum ad quartum posticum sitis, sub genu basali torta ac pubescens; articulatio aristae cum glumella eximia sed corona abscondita.

Corona cylindracea v. subtetragona (0,35-0,50 mm alt. et diam.) alba v. albida glabra a glumella coarctatione obsoletissima, saepius aegre perspicua, separata, acie minute laxiusculeque denticulato-setulosa.

Species habitu *St. uspallatensi* Speg. valde similis, sed notis plurimis certe optimeque distincta.

37. *Stipa arcaensis* Speg., n. sp.



37. *Stipa arcaensis* Speg.

a. Spicula $\frac{1}{2}$

b. Flosculus $\frac{1}{2}$

c. Flosculus $\frac{3}{4}$

Diag. Glumae oblongae, flosculus parum superantes, 3-nerves, subhyalinae; flosculus subfusoides laxe pilosulus; corona nulla; anthopodium diametrum flosculi aequans v. parum superans; arista persistens, flosculo 4-5-plo longior. Culmi sat robusti folia planiuscula herbacea laevia superantes; panícula primo anguste spiciformis dein patula relaxata.

Hab. In rupestribus montanis et alpinis, praecipue inter dumeta, *Cuesta del Arca* y *Cuesta de Trancas*, inter prov. de *Tucumán* et *Salta*, Dec. 1896 et Febr. 1897 (C. S.).

Obs. Perennis caespitosa.

Culmi folia superantes validiusculi (600-800 mm alt.=1,5-2,5 mm diam.), medio fistulosi, in extremis medullosi-farcti, laevissimi, glaberrimi non scabri, ad apicem usque foliati, erecti, nodis leniter incrassatis fuscescentibusque glabris.

Folia omnia isomorpha, laxa, herbacco-mollia viridia, limbis planis (150-500 mm long.=3-8 mm lat.) sursum longe sensimque attenuatis convolutisque, apice acutissimis sed non pungentibus, lon-

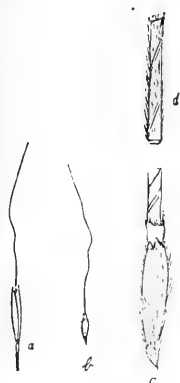
gitrorsum utrimque tenuiter striato-costulatis (nervis 11-27), dorso non scabris, ventre scaberulis glabris, vaginis pallidioribus subrelaxatis striatulis glabris v. tenuissime pulverulento-subpuberulis non scabris, ore saepius pubescentibus coarctatulis, auriculis non v. parce setuloso-barbatis, ligulis magnis marginiformibus truncatis denticulato-fissis e hyalino subscariosis.

Inflorescentia primo coarctata subspicata (200-300 mm long.= 10 mm diam.) erectiuscula dein expansa secunda nutans laxa, basi semper vagina folii supremi spathacco-inflata vestita, rachi laevi, ramis elongatis gracilibus paucispiculigeris, pedicellis adpressis (1-20 mm long.) angulosi scaberrimis sursum vix incrassatulis.

Spiculae laxae primo erectae adpressae dein patulae nutantes; glumis subhyalinis, flosculos parum superantibus, non v. obsolete subearinatis, oblongis, 3-nervibus superne breviter angustatis apice obtusiuscule acutatis non aristulatis subaequilongis, infera (11-12 mm long.=2-2,5 mm lat.) superam (10,5-11,5 mm long.=1,75-2 mm lat.) parum superante; flosculis teretibus lenissime e lanceolato subobclavulatis (cum anthopodio et arista 45-60 mm long.=cum anthopodio sine arista 8,5-9,5 mm long.=sine anthopodio et arista 7,5-8,25 mm long.=0,75-1 mm diam.) sursum a basi ad apicem sensim lenissimeque attenuatis, deorsum non v. vix angustatis, glumella infera subtenui subrigidula pallida laxè adpresseque pilosula; glumella supera brevissima (1,5 mm long.=0,5-0,6 mm lat.) obtusa planiuscula hyalina enervi glabra; anthopodio sat robusto acuto (1-1,25 mm long.) dense adpresseque albo-villoso.

Arista persistens (36-48 mm long.) subtenuis obsolete 2-geniculato-torta, geniculo supremo parum supra medium, infero ad quartum infimum sitis, tota nuda, scabrida, pallida; articulatio aristae cum glumella eximia annulo-nerviformis vix incrassata, pilis erectis arista adpressis breviusculis sat numerosis cincta.

Corona plane nulla v. obsoletissime callosa cum glumella continua.

38. *Stipa leptothera* Speg., n. sp.8. *Stipa leptothera* Speg.a. Spicula $\frac{1}{3}$.b. Flosculus $\frac{1}{3}$.c. Flosculus $\frac{1}{3}$.

Diag. Glumae lanceolatae, flosculo sat longiores, 3-nerves, e virescenti violascentes; flosculus subfusioideus pubescens; corona subobsoleta callosa pusilla; anthopodium diametrum flosculi aequans v. vix superans villosum; arista decidua tenuis flosculo 5-7-plo longior. Culmi graciles folia herbacea planiuscula laevia longe superantes; panícula angusta vaginata erecta v. nutans.

Hab. In pratis montanis et alpinis *Cuesta del Arca* inter prov. *Tucumán* et *Salta*, Dec. 1896 et Febr. 1897.

Obs. Perennis, subcaespitosa, caespitibus herbaceis laxis mediocribus v. parvis (150-250 mm alt.=100-150 mm diam.)

Culmi sat numerosi in quoque caespite, folia saepius longe superantes (350-500 mm alt.=1-1,25 mm diam.) intus semper toti medullosi-farcti, glabri, non v. obsoletissime subscabri, longitrorsum tenuiter striati, ad apicem usque foliati, recti v. basi geniculato-arcuati, 2-4-nodi, nodis non v. vix incrassatis subfuscescentibus glabris.

Folia omnia isomorpha, in juventute subulato-convoluta, per aetatem in vivo plus minusve applanatulo-aperta, in sicco laxo convoluta, viridia herbacea vix rigidula, limbis erectiusculis (25-150 mm long.=1,25-2,50 mm lat. apert.), dorso subillime scaberulis, glabris laevissimis v. vix obsolete striatis, ventre 5-9-nervis (interjunctis 2-6 alteris tenuioribus) ad nervos sparse minutaeque pilosulis,

apice breviuscule attenuato-acutatis non pungentibus, vaginis adpressis pallescentibus non v. tenuiter striatis, ore truncato-rotundatis glabris v. saepe barbatulis, ligulis (infimis obsoletis) arcuatis v. ovatis denticulatis v. lacero-fissis hyalinis.

Inflorescentia paniculata (150-200 mm long.) primo linearis adpressa, basi vagina folii supremi sat inflata vestita, dein plus minusve exerta secunda v. relaxato-nutante, subdepauperata, rachi laevi, ramis tenuibus brevissimis v. elongatis saepius supra medium tantum spiculigeris scabridis, pedicellis (1-10 mm long.) apice sensim compresso-dilatatulis scaberulis.

Spiculae primo erectae adpressae dein patentiusculae v. nutantes, glumis semper adpressis pallescenti-subvirescentibus v. obsolete subviolascentibus, flosculo dimidio longioribus, non v. vix carinatis, anguste lanceolatis, deorsum leniter angustatis sursum longius attenuato-acutatis sed non aristatis, infera 3-nervi (8-9 mm long. = 1,50-1,75 mm lat.) superam 3-nervem, saepe utrimque nervo altero tenuissimo subobsoleto addito et tum sub 5-nervem (7,5-8,5 mm long. = 1,25-1,50 mm lat.) parum superante; flosculis e terete lenissime subfusoides v. (cum anthopodio et arista 28-40 mm long. = cum anthopodio et corona 4,75-5,25 mm long. = sine anthopodio et corona 3-3,50 mm long. = 0,6-0,8 mm diam.) utrimque parum attenuatis, glumella infera submembranacea vix subcoriacea pallescente, pilis albidis subbrevis mollibus adpressis, coronam abscondentibus subsuperantibusque, subdensiusculis ubique vestita; glumella supera dimidio brevior (1,5 mm long.) angusta subhyalina, enervi glabra; anthopodio teretiusculo non v. vix subturbinatulo rigidulo acuto (0,75-0,90 mm long. = 0,15-0,20 mm diam.) pallido, dense adpresseque albo-villosulo.

Arista facillime caduca, pallida tenuis (23-36 mm long.) subrigida nuda scaberula, 2-geniculata, geniculo supero ad medium, infero ad quartum infimum sitis, infra genua torta ac pubescens; articulatio aristae cum glumella eximia sed coronula occultata.

Corona parum perspicua pusilla (0,5 mm long.=0,25-0,35 mm diam.) callosa albida saepius superne a latere, basi ventre et dorso compressula glabra, acie nuda v. vix pilosula, dorso non v. obsoletissime emarginata, ventre minute mucronulata v. auriculata.

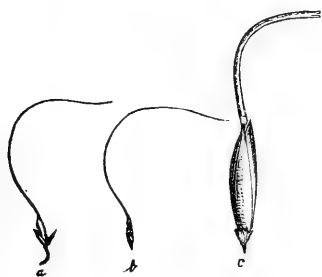
Species *St. arcaensi* Speg. nec non *St. nubicolae* Speg. affinis, ab utraque tamen satis riteque distincta.

VII. PARASTIPA Speg.

Char. Glumae flosculo breviores; flosculus aequilateralis subfusoides, glaber, laevis, glumella infera marginibus hyantibus, glumellam superam aequilongam subrigidulam aequilongam non sulcatam ostendens, cum arista persistente non geniculata subcirrhosa subcrassiuscula nuda, corona plane nulla, continua; anthopodium breve acutiusculum villosulum.

Subgenus inter genera *Stipa* et *Muehlenbergia* medium.

39. *Stipa rariflora* (Hook. f.) Benth.



39. *Stipa rariflora* (Hook. f.) Benth.

a. Spicula $\frac{1}{1}$

b. Flosculus $\frac{1}{1}$

c. Flosculus $\frac{2}{1}$

Muehlenbergia rariflora Hook. fil., Flor. ant. v. II, p. 371, tab. CXXXI.

Stipa rariflora Benth., Journ. Linn. soc. XIX, p. 31.

Diag. Glumae lanceolatae flosculo dimidio breviores, 1-nerves, violascentes; flosculus fusoides glaber laevis violascens; anthopodium flosculo triplo brevius albo-villosum; corona plane nulla; arista persistens, subcrassiuscula canaliculata, flosculo 10-plo longior fusco-violacea. Culmi graciles folia brevina laxa convoluta laevia pluries superantes; panicula nuda paucispiculigera laxissima erecta v. nutans.

Hab. In rupestribus subuliginosis in *Staaten island* et *Fuegia*, aest. 1882 (C. S.).

Obs. Perennis sparsa rarius gregaria parceque caespitulosa.

Culmi folia saepius longe superantes subgraciles (150-300 mm alt.=0,5-1 mm diam.) glaberrimi laevissimi, nodis saepius absconditis non incrassatis leniter fusciscentibus.

Folia omnia isomorpha vix caespitosa plus minusve intense viridia subrigidula, limbis in vivo canaliculato-planiusculis in sicco saepius laxe involutis erectis v. subcircinatis (25-50 mm long.=0,5-1 mm diam. conv.=1,5-2,5 mm lat. apert.) glaberrimis laevissimis, dorso obsolete striatis, ventre 5-11-nervulosis, apice breviter acutato-attenuatis non pungentibus, vaginis adpressis v. relaxatis pallidioribus vix striatis glaberrimis ore rotundatis, auriculis cum ligulis hyalinis marginiformibus (0,35-1,25 mm alt.) obtusis integris v. vix denticulatis continuis.

Inflorescentia longe exerta non vaginata, primo erecta angusta (50-70 mm long.) dein patulo-nutans, valde depauperata, 3-15-spiculigera, rachi et ramis paucis subapicalibus solitariis remotis purpurascensibus glaberrimis laevissimis, pedicellis (0-5 mm long.) non v. vix summo apice leniter incrassatulis.

Spiculae laxae remotiusculae erectae v. nutantes; glumis atris v. atro-purpurascensibus vix apice hyalino-virescentibus lanceolatis subcoriacellis subopacis tenuissime obsoleteque 1-nervibus vix carinatulis, infera (3 mm long.=0,80-1 mm lat.) apice integra superam (3 mm long.=0,75-0,95 mm lat.) apice minute bifidam aequante v. vix superante; flosculis tereti-fusoideis (cum anthopodio et arista 40-50 mm long.=cum anthopodio sine arista 4-4,15 mm long.=0,75 mm diam.) glumella infera atro-purpurascens coriacea glaberrima laevi non v. vix subnitida, supera subaequilonga

lanceolato obtusiuscula coriacea subopaca; anthopodio conoideo brevissimo (0,15-0,20 mm long.) albo-villoso, acutiusculo.

Arista pro ratione crassiuscula vix torta, utrimque applanato-canaliculata (36-46 mm long.) fusco-purpurascens non geniculata sed saepius incurva v. subcircinata. Articulatio nulla.

Corona nulla.

VIII. MICROSTIPA Speg.

Char. Glumae flosculo longiores; flosculus lanceolatus v. fusoides, glaber laevis v. scabridus, glumellae inferae margine altero externo alterum internum obtegente; glumella supera \pm evoluta plana enervis v. obsolete nervosa; anthopodium acutum diametrum flosculi non superans; corona nulla v. plus minusve evoluta; anthopodium glabrum v. villosum, flosculi diametro brevius; arista nuda saepius tenuis persistens v. decidua, \pm ve geniculata ac torta.

40. *Stipa scirpea* Speg., n. sp.



40. *Stipa scirpea* Speg.

- a. Spicula $\frac{1}{11}$
b. Flosculus $\frac{1}{11}$
c. Flosculus $\frac{5}{1}$

Diag. Glumae anguste lanceolatae, flosculum sat superantes, enerves, hyalinae; flosculus subfusoides glaber laevis pallidus; anthopodium obtusiusculum, diametrum flosculi non attingens, glabrum; corona nulla; arista persistens flosculo 8-10-plo longior. Culmi pusilli, folia setaceo-juncoidea laevia non v. vix superantes, panícula parva contracta eximie spathaceo-vaginata.

Hab. In rupibus melafiricis summi cacuminis (3300 m alt.) *Cerro de los Cordobeses* prope *Mendoza*, Jan. 1895 (C. S.).

Obs. Perennis caespitosa, caespitulis parvis (30-60 mm alt. et diam.) densis.

Culmi pauci in quoque caespite folia aequantes v. parum longiores (25-70 mm alt.=0,5-0,6 mm diam.) glaberrimi, laevissimi, apice eximie spathaceo-vaginati, erecti, nodis non incrassatis glabris.

Folia omnia isomorpha densissima rigidissima flavescencia, limbis tereti-complicatis juncoideis duris saepius falcatis (10-40 mm long.=0,5-0,8 mm diam.) sursum abrupte brevissimeque acuminato-mucronatis pungentibusque, extus laevissimis glaberrimis subnitentibus, intus 5-7-nervosis atque subpubescentibus, vaginis arcu adpressis pallidis glabris sed margine ciliolatis, ore rotundato-truncatis, auriculis dense crispuleque lanoso-villosis, ligulis angustissime marginiformibus scariosulis acie dense minuteque denticulato-fimbriatis.

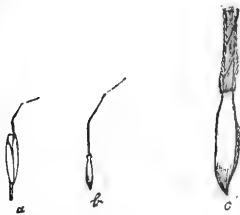
Inflorescentia dense subracemoso-spicata (10-25 mm long.=3-5 mm diam.), vagina folii supremi eximie majusculaeque spathacea primo tota involuta dein e latere plus minusve exerta, rachi laevi, ramis et pedicellis (1-3 mm long.) gracillimis non v. vix scabridis atque apice lenissime incrassatulis.

Spiculae constipatae pusillae erectae; glumis hyalinis, anguste lanceolatis enervibus, sursum acute longiusculeque attenuatis, infera (3,75-4 mm long.=0,75 mm lat.) superam (3,50-3,75 mm long.=0,6-0,7 mm lat.) vix superante, non carinatis, glabris; flosculis e lanceolato subfusoides (cum anthopodio et arista 18-24 mm long.=cum anthopodio sine arista 2-2,25 mm long.=0,25-0,40 mm diam.) e latere non v. leniter compressis, glumella infera tenui submembranacea albescente glaberrima et laevissima, supera subimperspicua enervi hyalina; anthopodio conoideo brevissimo (0,15-0,20 mm long.) obtusiusculo glaberrimo.

Arista tenuis persistens nuda pallida (16-22 mm long.) obsolete geniculata, non v. vix torta et scabrida. Articulatio glumellae cum arista parum manifesta vix transverse annulo-nerviformis.

Species statura vere pusilla, vagina spathacea atque exiguitate spicularum mox dignoscenda. An forma depauperata glabrataque *St. hystericinae* Speg.?

41. *Stipa paramilloensis* Speg., n. sp.



41. *Stipa paramilloensis* Speg.

a. Spicula $\frac{1}{4}$

b. Flosculus $\frac{1}{4}$

c. Flosculus $\frac{1}{4}$

Diag. Glumae latiuscule lanceolatae, flosculum parum superantes, *infera* quam supra *brevior*, 3-nerves e vire-scenti violascentes; flosculus subfusoi-deus non v. obsoletissime subscaber, glaber; anthopodium diametrum flosculi aequans v. vix superans, pubescens; corona subobsoleta calloso-marginifor-mis ciliolata; arista persistens flosculo 3-4-plo longior. Culmi folia subulato-juncoidea glabra v. saepe *retorse* sca-

brida non v. vix superantes; panicula angustissime linearis depau-perata, saepius vaginata.

Hab. Non rara in rupestribus alpinis (2000-3000 m alt.) *Cerro de los Cordobeses*, *Cerro Ximenes*, *Paramillo de Uspallata* prope *Mendoza*, Jan. 1895 (C. S.).

Obs. Perennis caespitosa v. rarius solitaria, caespitibus laxissi-mis parvis (50-100 mm alt.=20-50 mm diam.).

Culmi pauci folia plus minusve superantes subvalidi (150-350 mm alt.=1-1,5 mm diam.) glabri, laeves, ad apicem usque vagi-nati, erecti v. hinc inde leniter geniculati, nodis saepius absconditis non incrassatis annulatum sulcatis glabris fuscescentibusque.

Folia omnia isomorpha, primo e viridi lenissime glaucescentia, dein plus minusve flavescentia rigida juncoidea, limbis sub jove plus minusve canaliculato subplaniusculis, in sicco plus minusve laxe v. arcte convolutis (50-200 mm long.=1,5-4 mm lat.) sursum attenuato-acuminatis non v. vix pungentibus, extus lenissime sulcato-striatis, sulcis non v. vix pulverulentis, costulis glabris laxe papillois v. saepe retrorse pubescenti-scabris, intus validius nervosis, nervis 5-11, atque subpubescentibus, vaginis pallidioribus adpressis v. relaxatis glabris v. pubescentibus saepeque margine ciliato-pilosulis, ore truncatis auriculis rotundatis villosis-barbatis et dorso saepe annulo tomentoso cinctis, ligulis angustissime marginiformibus scarisulis acie dense minuteque fimbriato-ciliolatis.

Inflorescentia angustissime spicata subsecunda paucispiculigera (50-120 mm long.=5-7 mm diam.), deorsum vagina folii supremi subinflata plus minusve vestita, rachi subterete glabra laevi, ramis et pedicellis (1-10 mm long.) glabris, vix scabridis sursum leniter incrassatulis.

Spiculae subrelaxatae erectae adpressae; glumis virescentibus v. leniter violascentibus, flosculos longe superantibus, latiuscule lanceolatis, 3-nervibus, sursum breviter obtuseque acutatis, infera (7-9 mm long.=1,5-2,5 mm lat.) superam (7,50-10 mm long.=1,25-2 mm lat.) non aequante, non carinatis glabris; flosculis sublanceolatis (cum anthopodio et arista 23-40 mm long.=cum anthopodio et corona 6-7 mm long.=sine anthopodio et corona 5-5,50 mm long.=0,6-0,75 mm diam.) non v. e latere compressulis, glumella infera rigidula pallescente v. vix fuscescente, laevi v. minutissime scabrida glaberrima; glumella supera quadruplo brevior angusta hyalina enervi glabra; anthopodio rigidulo acuto pallido (0,5-1 mm long.) dense albo-villoso, villis dorso ad glumellae medium usque excurrentibus.

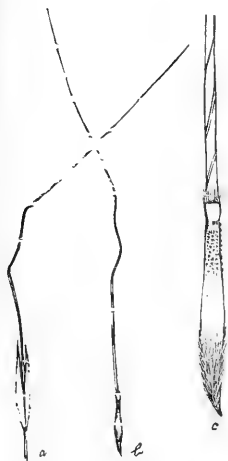
Arista crassiuscula pallida rigidula (18-24 mm long.) plus minusve 2-geniculata persistens, geniculo supero ad medium, infero

ad quartum infimum sitis, parte suprema recta scabriuscula glabra reliqua infera torta ac dense pubescente; articulatio aristae cum glumella imperspicua.

Corona vix calloso-marginiformis deorsum lenissime angustata, superne obtusa ac setulis albis densis (0,5 mm long.) aristae basi adpressis coronata.

Species ob glumam inferam breviorē quam supra inter omnes distinctissima.

41. *Stipa cordobensis* Speg., n. sp.



42 *Stipa cordobensis* Speg.

a. Spicula $\frac{1}{2}$

b. Flosculus $\frac{2}{3}$

c. Flosculus $\frac{1}{3}$

Diag. Glumae lineari-lanceolatae, flosculo duplo et ultra longiores, 1-3-nerves, hyalinae; flosculus subfusoides glaber, superne papilloso-asperulus; corona obsoleta cylindracea pallida cum glumella continua, acie ciliolata; anthopodium flosculo 3-4-plove longius acutum albo-villosum; arista persistens flosculo 7-9-plo longior, infra medium et infra tertium infimum geniculata. Culmi folia setaceo-subjuncoidea obsolete scabriuscula semper, etiam post anthesin, aequantes v. vix superantes; panicula angusta spiciformis relaxata.

Hab. Non rara ad ripas *Río Primero*, Dec. 1887 (C. S.) nec non in collinis circumvicinis, *Córdoba*, Jan. 1896 (T. Stuekert).

Obs. Perennis, dense caespitosa, caespitibus mediocribus (200-500 mm alt.=100-350 mm diam.).

Culmi ante et post anthesin folia aequantes v. leniter longiores (250-600 mm long.=0,75-1 mm diam.), ad apicem usque vaginati, basi modice sed eximie bulbosi, praefoliis ovatis v. ovato-lanceolatis deorsum dense pubescenti-villosis vestiti, glaberrimi non scabri, laevissimi v. vix obsolete longitrorsum striati, 1-v. 2-nodi, nodis omnino tectis non incrassatis concoloribus glabris.

Folia omnia isomorpha, confertissima fasciculata, e medio ad caespitis ambitum sensim breviora, extima v. infima in praefoliis transformata, glaucescenti-viridula, limbis e setaceo juncoides complicato-teretibus, ventre plus minusve canaliculato-sulcatis (25-250 mm long.=0,4-1 mm diam.=1-2 mm lat. apert.) rigidulis erectis glaberrimis non v. basin versus tantum obsolete retrorseque scabridis, non v. obsoletissime striatis, apicem versus sensim longiusculeque subulato-acutissimis subpungentiusculis, vaginis adpressis pallidioribus, non v. tenuiter striatis, internis glaberrimis v. margine externo obsolete subciliolatis, extimis, limbo destitutis, plus minusve e glabrato pubescentibus, non scabris, ore non coarctatis, auriculis non v. pilis nonnullis (aegre sub lente perspiciendis) ornatis, cum ligulis hyalinis glabris lanceolatis v. ovatis obtusis integris v. denticulatis continuis.

Inflorescentia primo erectiuscula (100-250 mm long.) valde depauperata, anguste linearis, secunda adpressa, deorsum vagina folii supremi plus minusve inflata vestita, dein patentiuscula relaxata subnutans, rachi tenui glaberrima, ramis valde remotis, infimis praelongis bi-v. quater-natis, basi saepius hyalino-ligulatis, simplicibus v. ultra medium ramulosis et pedicelligeris tenuibus glabris non scabris, pedicellis longiusculis (5-20 mm long.) angulosis glabris non v. vix ad angulos obsolete subscabris.

Spiculae laxiusculae primo erectae adpressae, dein non v. modice patentiusculae; glumis anguste lineari-lanceolatis, deorsum leniter virescentibus atque brevissime et vix angustatis, sursum hya-

linis longissime attenuato-acuminatissimis non aristulatis, glabris non v. vix nitentibus, carinatulis, ad carinam non scabris, infera 1-nervi, addito saepe utrimque nervo altero brevi tenuissimo aegre vitro perspicuo, (17-22 mm long.=1-1,25 mm lat.) superam 3-nervem (15-18 mm long.=1,25-1,50 mm lat.) sat superante; flosculis e terete subtrigonis fusoidcis v. leniter conoideo-elongatis (cum anthopodio et arista 80-100 mm long.=cum anthopodio et corona 8-10 mm long.=sine anthopodio et corona 5,5-6 mm long.=0,5-0,6 mm diam.), glumella infera glabra, primo tenui pallida laevi, dein coriacella fuscidula ubique (sed apice praecipue et grossius) minute densiusculeque scabrido-papillosa, sursum sensim longiusculeque attenuata, saepius longitudinaliter minute plicato-subfoveolata ac cum corona continua, deorsum leniter brevissimeque angustata, dorso leniter carinata, ad latera tenuiter 1-nervosa; glumella supera angustissima brevior (1,5-2 mm long.) acuta enervi hyalina; anthopodio longiusculo gracillimo (1,25-2 mm long.=0,15 mm diam.) rigido pungente dense albo villosa, villis adpressis per carinam glumellae ad ejusdem medium usque excurrentibus.

Arista persistens v. tantum in senectute caduca, subtenuis (70-80 mm long.) nuda, undique dense minuteque scabra sed non pubescens, primo obsolete dein validiuscule 2-geniculata, geniculo supero infra medium (parte aristae recta supera reliquam inferam, flosculo addito, aequante v. vix superante), infero semper obsoleto ad tertium v. quartum infimum sitis, sub geniculis non v. torta; articulatio aristae cum glumella sat perspicua sed non incrassata.

Corona in juventute non v. aegre perspicua dein sat distincta, quam glumella pallidior callosa cylindracea (0,6-0,85 mm long.=0,3-0,45 mm diam.) glabra laevi, deorsum subindeterminata ac subtrigona, ad latera obsolete foveolata, superne truncata minute dense breviterque pectinato-ciliolata.

Species *St. filiculmi* Del. peraffinis et acute distinguenda; culmis post anthesin non filiformi-elongatis, paniculis magis depauperatis, flosculis subtrigonis papillosis atque corona manifesta sat recedens.

43. *Stipa filiculmis* Del.43. *Stipa filiculmis* Del.

- a. Spiculae $\frac{1}{2}$
 b. Flosculi $\frac{1}{2}$
 c. Flosculi $\frac{1}{2}$

pere filiformi-elongati; panicula linearis depauperata non v. parce relaxato-patentiuscula.

Hab. Vulgata per totam planitiem pamparam, praecipue in sabulosis, a *Chubut* ad *Córdoba* usque, per ann. 1880-1900.

Obs. Perennis dense caespitosa, caespitibus mediocribus v. maximis (200-850 mm alt. et diam.).

Culmi ante et per anthesin folia aequantes v. parum superantes (250-900 mm long.=0,5-0,9 mm diam.) toti vaginati, remotissime

Stipa filiculmis Delil., Ind. sem. hort. Monsp., p. 7 (1849)=Arech., Las gram. urug. p. 264, n. 8 (1894)!

Stipa ceresiensis OK., Rev. gen. plant., III, 2, p. 369 et 371. (1898)!

Diag. Glumae lineari-lanceolatae, flosculo duplo et ultra longiores, 3-nerves, hyalinae; flosculus subfusoides glaber laevis v. obsolete asperulus, non nitens; corona plane nulla sed articulatio aristae cum glumella calloso-nervosa glabra v. ciliolata; anthopodium flosculi diametro 2-3-plo longius villosum; arista persistens flosculo 9-10-plo longior, infra medium et ad tertium infimum geniculata. Culmi folia capillaria v. setacea primo breviores, post anthesin summo-

2-3-nodi, internodiis praelongis, post anthesin internodio supremo paniculam fulciente mox summopere elongato incurvo-pendulo (atque ad maturitatem basi autotomice caduco cum inflorescentia facillime vento divulso et per campos procul translato) internodiis 2 inferis glabris (v. vix infra nodos, sed non semper, tenuissime pulverulento-puberulis) laevissimis, internodio supremo etiam glabro sed scaberrimo, non striato, nodis non incrassatis nec fuscescentibus glabris.

Folia omnia isomorpha confertissima fasciculata pallide virescentia v. flavescentia, limbis capillaribus v. setaceis complicato-teretibus, ventre tenuissime canaliculatis (100-700 mm long.=0,3-0,5 mm diam.) rigidis erectis v. vix apice leniter incurvis glaberrimis scaberrimis, non v. obsoletissime substriatis, apicem versus sensim longiusculeque subulato-acuissimis pungentiusculis, vaginis adpressis pallidioribus tenuissime striolatis glabris non scabris, ore non barbatis nec coarctatis, auriculis cum ligulis omnibus, infimis etiam, lineari-lanceolatis obtusis integris, superis sat elongatis scariosulis ex albo subhyalinis continuis.

Inflorescentia primo erectiuscula depauperata, anguste linearis secunda (50-200 mm long.) deorsum breviter vaginata v. nuda, dein, ob internodium supremum filiformi-elongatum, pendula, non v. modice patentiuscula, rachi ramis, ultra medium pedicelligeris, nec non pedicellis longiusculis (5-20 mm long.) sursum sensim leniterque incrassatis, scaberrimis.

Spiculae laxiusculae primo erectae adpressae dein non v. parce patentiusculae; glumis anguste lineari-lanceolatis, basi virescentibus, sursum hyalinis longissimeque attenuato-acuminatissimis tenuiterque aristulatis glabris, eximie 3-nervibus, ad nervos nec non margine scaberulis, infera (12-22 mm long. = 1,15-2 mm lat.) superam (10-18 mm long.=1-1,75 mm lat.) longe superante; flosculis e tereti lenissime subconoideis v. subfusoides (cum anthopo-

dio et arista 50-90 mm long.=cum anthopodio sine arista 6-9 mm long.=sine anthopodio et arista 4-6 mm long.=0,5-0,85 mm diam.), glumella infera glaberrima non nitente primo tenui laevi pallida, dein flavida, postremo coriacea fuscidula non v. vix minutissime subimperspicueque (sub lente valida) papillulosa, sursum longiuscule sensimque attenuata, cum arista fere continua, deorsum lenissime brevissimeque angustata; glumella supera anguste lineari (1,5-2 mm long.) acuta, enervi, hyalina; anthopodio terete gracili pallido rigido acutissimo pro ratione longiusculo (1,5-2 mm long.=0,15 mm diam) densiuscule adpresseque albo-villoso, villis per dorsum glumellae non v. parum excurrentibus.

Arista tenuis v. subcrassiuscula persistens (40-75 mm long.) nuda, dense minuteque papillato-scaberula, primo obsolete dein valide 2-geniculata, geniculo supero infra medium (parte recta suprema reliquam inferam, flosculo addito, superante) infero ad tertium v. quartum infimum sitis, sub geniculis valide torta; articulatio aristae cum glumella plus minusve tenuiter annulato-noduliformis, quandoque glaberrima quandoque minute adpresseque ciliolata.

Corona nulla.

Varietates sequentes facile distinguendae:

a) major Speg.: statura maxima, culmis post anthesin maxime elongatis (900-1200 mm long.), flosculis 8-9 mm long. et aristis 65-80 mm long. tenuioribus. In planitie vigen.

b) minor Speg.: statura parvula v. mediocri, culmis post antesis parum elongatis (200-500 mm long.), spiculis minoribus glumis 10-15 mm long., flosculis 6-7 mm long. et aristis 40-50 mm long. crassioribus rigidioribusque. In montuosis vegetans.

Gramen ab incolis sub nomine *Paja voladora* distinctum, animalibus pabulum parum gratum praebens, sed periculum magnum incendii, praecipue secus *vias ferreas* constituens, ob inflorescentias aridas secus margines vento accumulatas.

Specimina inspecta sunt:

- a/* In campis prope *Lago Nahuel-huapi* Febr. 1898 (C. S.).
- b/* In pratis prope *Bahía Blanca*, Dec. 1899 (C. S.).
- c/* In vallibus *Sierra Ventana*, Nov. 1895 (C. S.).
- d/* In campis prope *Sierra de Curámalal*, Dec. 1899 et Nov. 1900 (C. S.).
- e/* In campis prope *Dennehy*, prov. *B. Aires*, Nov. 1898 (C. S.).
- f/* In campis prope *Rufino*, prov. *S. Fé*, Jan. 1897 (C. S.).
- g/* In pratis prope *Colonia Ceres*, Jan. 1892 (OK.).
- h/* In pratis prope *Montecideo* (J. Arechavaleta).
- i/* In pratis *Teka-choique*, *Chubut*, Dec. 1900.

IX. NASSELLA Trin.

Char. Glumae flosculo longiores; flosculus ellipsoideus, clavulatus v. obovatus, plus minusve inaequilateralis et dorso gibbosulus, e latere compressulus, glaber v. pubescens laevis v. scaber; glumellae inferae margine altero externo alterum internum obtegente; glumella supera \pm evoluta plana enervis v. obsolete nervosa; corona nulla v. pusilla umboniformis; anthopodium acutum diametro antero-postico flosculi semper brevius v. subaequilongum, glabrum v. villosum; arista saepius leniter excentrica nuda persistens v. \pm ve caduca.

44. *Stipa pampeana* Speg.44. *Stipa pampeana* Speg.a. Spicula $\frac{1}{4}$ b. Flosculus $\frac{1}{4}$ c. Flosculus $\frac{1}{4}$

Stipa pampeana Speg.; Contr. flor. Ventan., p. 64, n. 310 (1896).

Diag. Glumellae elliptico-lanceolatae, flosculo subduplo triplove longiores 3-nerves atro-purpureae; flosculus oblanceolatus v. obovatus compressus, dorso gibbosus, laevis glaber nitidus, anthopodio longiusculo acuto villis albis longis densis flosculum totum superantibus ac obvolv-

ventibus vestito suffultus; corona pusilla subturbinata, acie longiuscule albo-villosa; arista persistens flosculo 10-plo longior. Culmi graciles, folia subulato-setacea laevia non v. parum superantes.

Hab. Vulgata in pratis montanis saxosis *Sierra Ventana*, Nov. 1895, *Sierra Curámalal* et *Teka-choique*, *Chubut*, Dec. 1899 (C. S.).

Obs. Perennis caespitosa, caespitibus subparvis sed gregariis (120-250 mm alt.=50-100 mm diam.) densiusculis.

Culmi solitarii v. parum numerosi in quoque caespite, folia aequantes v. saepius superantes graciles (250-450 mm alt.=0,50-0,75 mm diam.), nudiusculi v. ad apicem usque foliosi, glaberrimi, laevissimi, erecti, rigidi, nodis non incrassatis vix annulato-fuscescentibus glabris.

Folia omnia isomorpha fasciculato-erecta conferta rigidissima, viridi-flavescentia, limbis tereti-subulatis, ventre vix prope basin breviter minuteque canaliculatis (50-120 mm long.=0,50-0,75 mm diam.) rectissimis, sursum sensim breviuscule attenuato-acutissi-

mis pungentissimisque, glabris laevibus sed imperspicue scabridis e dorso vaginarum exsurgentibus, vaginis arete adnatis pallidioribus glabris non v. vix striatulis, ore attenuatis atque in ligulis glaberrimis valde elongatis (3-6 mm long.) lanceolatis subhyalinis subobtusiusculis integris productis.

Inflorescentia anguste spicata erecta (60-100 mm long.=3-5 mm diam.) nuda v. basi vagina folii supremi non v. vix ampliata vestita, depauperata, rachi terete vix scabrida, ramis et pedicellis (1-8 mm long.) scabris sursum leniter dilatatulis.

Spiculae subrelaxatae, 25-35 in quaque panícula, erectae; glumis glabris nitentibus subduplo v. usque ad triplum flosculo longioribus, 3-nervibus, atro-purpureis, elliptico-lanceolatis sursum plus minusve attenuatis, acutis atque hyalinis, infera (7-8 mm long.=1,75-2 mm lat.) superam (5-7 mm long.=2-2,15 mm lat.) parum superante et saepe brevissime aristulata; flosculis inaequilateraliter oblanceolatis v. obovatis, gibbosulis (cum anthopodio et arista 25-40 mm long.=cum anthopodio et corona 3-3,5 mm long.=sine anthopodio et corona 2 mm long.=1-1,25 mm diam. antero-postico) e latere compressis (0,5 mm crass.) glumella infera rigidula coriacella pallescente glabra laevi (ad maturitatem sub lente valida obsoletissime longitrorsum striatula) subnitente, supera pusilla angusta (0,75 mm long.) obtusiuscula hyalina enervi, anthopodio subulato rigido acuto (0,5-1 mm long.) pilis tenuibus albis praelongis (3-4 mm long.) flosculum totum obvolvuntibus donato.

Arista excentrica subtenuis pallida persistens (23-38 mm long.) nuda vix scabrido-papillosa, leniter 2-geniculata, geniculo supero ad medium, infero ad tertium posticum sitis. Articulatio eximia sed coronula abscondita.

Corona pusilla e terete turbinatula (0,25 mm alt.) acie dense longiusculeque villosa, pilis aristae adpressis.

Species eximia distinctissima, mox dignoscenda.

45. *Stipa trichotoma* Nees45. *Stipa trichotoma* Neesa. Spicula $\frac{1}{1}$ b. Flosculus $\frac{1}{1}$ c. Flosculus $\frac{1}{1}$

Stipa trichotoma Nees ab Esenb., Agrost. bras., p. 375 (1829).

Urachne trichotoma Trin., Act. Petrop. ser. 1, p. 24 (1849).

Nassella trichotoma Hack., Arech., Las gram. urug. p. 276, n. 1 (1094)l.

Diag. Glumae ovato-lanceolatae, flosculo 3-4-plo longiores, 3-nerves, purpurascens; flosculus obovatus dorso gibbosus, glaber scabriusculus; anthopodium brevissimum albo-villosum; corona nulla; arista persistens flosculo 8-15-plo longior. Culmi graciles folia setacea scabrida primo subaequantes, dein, internodio supremo elongatissimo filiformi autotomico, longe superantes, panícula ampla patentissima laxissima, ramis omnibus eximie trichotomis.

Hab. Species vulgarissima per totam planitiem pamparum, per ann. 1890-1900.

Obs. Perennis caespitosa, caespitibus magnis penicilliformibus (150-500 mm alt. et diam.) densis.

Culmi numerosi in quoque caespite ante et per anthesin folia aequantes v. parum superantes ad apicem usque vaginati erecti (150-500 mm long.), post anthesin, internodio supremo mox valde elongato, nudi nutantes et facillime sponte a caespite (autotomico) separabiles gracillimi (0,4-0,6 mm diam.), glabri laeves, nodis non v. vix incrassatis glabris.

Folia omnia isomorpha, fasciculato-erecta conferta rigidula, pallide virescentia v. subflavescentia, limbis complicato-filiformibus

teretibus v. lenissime compressulis gracillimis (100-400 mm long. = 0,3-0,5 mm diam.) glabris laevibus sed minutissime scaberulis intus concoloribus 1-nervosis (apertis 0,75-1 mm lat.) vix pulverulentis, sursum sensim attenuato-acuminatis pungentibusque, vaginis arcte adpressis glabris laevibus v. vix obsolete striatulis non scabris, ore abrupte rotundatis atque cum ligulis e hyalino scario-sulis plus minusve evolutis (0-5 mm long.) obtusis inaequilateralibus glaberrimis integris continuis.

Inflorescentia (100-250 mm long.) primo erecta angusta subcon-tracta, vagina folii supremi non v. vix ampliata plus minusve vesti-ta, dein patentissima laxissima longe exerta, rachi tenui subangulo-sa et scaberula, ramis alternis remotis saepius geminatis gracillimis angulosis scabridis ad v. supra medium bis v. ter trichotomis (10-100 mm long.) pedicellis elongatis (1-8 mm long.) scabridis vix apice ipso breviter leniterque incrassatis.

Spiculae paucae in quoque ramulo, primo adpressae dein diva-ricatissimae, patulae v. nutantes, glumis carinatulis glabris (in ca-rina scabris) subnitentibus, flosculo 3-4-plove longioribus, 3-ner-vibus, obscure purpureis (in senectute saepius decoloratis), ovato-lanceolatis sursum longe acuteque hyalino-attenuatis, infera (6-7 mm long. = 1,25 mm lat.) superam (5-6,5 mm long. = 1,15 mm lat.) parum excedente; flosculis inaequilateraliter obovatis dorso valde gibbis (cum anthopodio et arista 20-32 mm long. = cum antho-podio sine arista 1,75-2 mm long. = 0,80-1 mm diam. antero-postico) e latere leniter compressis (0,6-0,75 mm crass.), glumella infera rigida coriacea primo pallida v. flavescente, dein plus mi-nusve infuscata, glabra, in juventute sublaevi, per aetatem minute ruguloso-papillosa; supera pusilla ovata (0,50 mm long.) rigidula obtusula enervi; anthopodio subconoideo acuto pusillo (0,15-0,25 mm long.), villis albis, tertium v. dimidium flosculi attingentibus, densiusculis vestito.

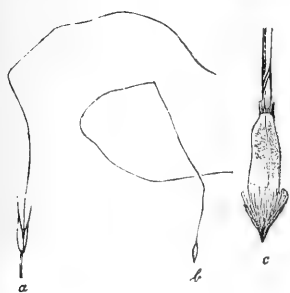
Arista excentrica subtenuis pallida persistens (18-30 mm long.) nuda vix scabrigo-papillosa, obsolete 2-geniculata, geniculo supero infra medium, infero ad tertium posticum sitis. Articulatio glumellae cum arista vix manifesta.

Corona vera nulla, sed umbonulus glumellae (auriculae ejusdem) nudus glaber subobliquus foveolatus.

Species praedistincta ab incolis sub nomine *Paja voladora* (cum aliis communi) etiam cognita, panicula et parte culmi suprema maximeque elongata ad maturitatem vento abreptis et per aërem volitantibus magnum periculum incendii praebens.

Specimina inspecta sunt:

- a/* Ex campis secus *Río Negro*, Patag., Jan. 1898 (C. S.).
- b/* Ex pratis *Fortín Mercedes*, Río Colorado, Jan. 1898 (C. S.).
- c/* Ex pratis prope *Sierra Ventana*, Nov. 1895 (C. S.).
- d/* Ex pratis prope *Sierra de Curamalal*, Dec. 1899 (C. S.).
- e/* Ex pratis prope *Sierra del Tandil*, Mart. 1892 (C. S.).
- f/* Ex pratis prope *Estación Dennehy*, Nov. 1898 (C. S.).
- g/* Ex pratis prope *Córdoba*, aest. 1897-99 (C. S., T. Stuckert).
- h/* Ex pratis prope *Montevideo*, aest. 1890-99 (C. S., J. Arechavaleta).

46. *Stipa tenuissima* Trin.46. *Stipa tenuissima* Trin.

- a. Spicula $\frac{1}{4}$
 b. Flosculus $\frac{1}{4}$
 c. Flosculus $\frac{1}{4}$

Stipa tenuissima Trin., Act. Petrop., ser. 1, p. 36 (1836).

Stipa oreophila Speg., Contr. Flor. Ventana, p. 65, n. 311 (1896).

Stipa mendocina Phil., Ann. Un. Chil. vol. 27, sem. II, p. 339 (1865).

Stipa geniculata Phil., Sert. Mend. II, Ann. Un. Chil., v. 34, p. 204 (1870)!

Diag. Glumae lanceolatae, flosculo sub-3-4-plo longiores, 3-nerves,

c hyalino subviolascens; flosculus elongatus parvus dorso leniter gibbosus e latere subcompressulus glaber, tenuissime asperulus non nitens; anthopodium diametrum dimidium flosculi aequans villosum acutum; coronula pusilla umboniformis ciliolata; arista persistens tenuissima 24-30-plo flosculo longior. Culmi folia capillaria v. setacea scabrida parum superantes, panicula vaginata contracta.

Hab. Vulgatissima locis aridissimis et sabulosis, praecipue in dunis mediterraneis, per totam planitiem pamparum, ann. 1880-1901.

Obs. Perennis fasciculato-caespitosa, caespitibus magnis penicilliformibus erectis (300-500 mm alt. et diam.).

Culmi folia aequantes v. parum superantes graciles (300-650 mm alt.=1 mm diam.) erecti, fistulosi, longitrorsum subimperspicue striati, glabri v. vix scaberuli praecipue sub nodis non v. parcissime incrassatis saepeque fuscescentibus.

Folia omnia isomorpha, dense fasciculato-constipata, flavido-subvirescentia, limbis complicato-teretibus v. e latere leniter compressulis, valde scabris non striatis (200-500 mm long.=0,3-0,5 mm diam.), intus pallescentibus pulverulentis saepius 5-costulato-sulcatis (1-1,5 mm lat. apert.) apice sensim longeque attenuato-subulatis acutissimis rigidis atque pungentibus, vaginis pallidioribus adpressis v. subrelaxatis, obsolete striatulis, glabris sed ad marginem saepe plus minusve pubescenti-villosulis non scabris, ore non contractis nec barbatis, in ligulas late ovatas obtusas scariousulas albidas sed non hyalinas cum auriculis continuas productis.

Inflorescentia (100-250 mm long.) primo erecta angusta, vagina folii supremi parum ampliata deorsum involuta, dein expansa secunda et paulo supra folia exerta, rachi tenui glabra laevi, ramis alternis remotiusculis solitariis v. geminatis gracillimis scaberrimis a basi alterne ramulosis, pedicellis (0-10 mm long.) angulatis dense scabrido-pubescentibus, apice vix incrassatulis.

Spiculae paucae et secundae in quoque ramulo, semper adpressae; glumis carinatulis glabris (in carina scabris) flosculo 3-4-plove longioribus hyalinis v. pallidissime violascentibus, lanceolatis, sursum longissime acuteque attenuato-aristulatis, tenuissime 3-nerviis (nervis lateralibus valde abbreviatis saepeque, in infera praecipue, parum perspicuis) infera (7-11 mm long.=0,75-1 mm lat.) superam (5-8 mm long.=0,6-0,75 mm lat.) paululo excedente; flosculis oblongis, dorso inaequilateralibus v. leniter gibbosulis (cum anthopodio et arista 50-90 mm long.=cum anthopodio sine arista 2-3 mm long.=0,5-0,7 mm diam. antero-postico) e latere non v. leniter compressulis (0,5 mm crass.) dorso carinatulis, glumella infera pallida coriacea in quoque latere obsolete 1-nervosula, glaberrima, in juventute laevi (sed semper opaca) per aetatem dense minutissimeque ruguloso-papillosa (saepe obsolete), supera pusilla elliptica (0,40 mm long.) rigidula enervi obtusula; anthopodio pu-

sillo (0,20-0,25 mm long.) obconico acuto dense adpresse breviusculeque albo-villoso.

Arista leniter excentrica tenuissima praelonga persistens (48-88 mm long.) nuda scabrido-papillosa 1 (an 2?)-geniculata, geniculo manifesto ad tertium inferum sito. Articulatio glumellae cum arista vix perspicua.

Corona vera nulla sed umbonulus glumellae subcylindraceus (0,15 mm long.) acie saepius minute densiusculeque ciliolatus.

Varietates v. formae sequentes facile distinguendae:

a) oreophila Speg.: caespitibus contractis, foliis rigidis pungentissimis, paniculis folia non superantibus patulis, glumis majoribus (8-11 mm long.) violascentibus, flosculis (3 mm long.) magis scabris. In collinis et montuosis occurrens.

b) planicola Speg.: caespitibus laxioribus, foliis minus rigidis, non v. vix pungentibus, paniculis saepius longe exsertis contractis, glumis minoribus (5-9 mm long.), flosculis (2-2,5 mm long.) vix scabro-rugulosis. In planitie vegetans.

Specimina inspecta sunt:

a/ Ex rupestribus *Sierra Ventana*, Nov. 1895 (C. S.).

b/ En pratis secus *Río Negro* et *Río Colorado*, Febr. 1898 (C. S.).

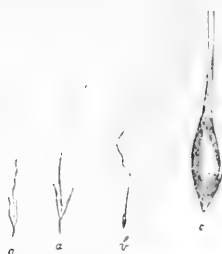
c/ Ex pratis prope *Sierra Curámalal*, Dec. 1899 (C. S.).

d/ Ex pratis prope *Córdoba*, aest. 1887-99 (C. S., T. Stuckert).

e/ Ex campis prope *Mendoza*, Jan. 1896 (C. S.).

f/ Ex campis prope *San Juan*, Apr. 1897 (C. S.).

g/ Ex aridis prope *Mendoza*, Febr. 1901 (C. S.).

47. *Stipa sanluisensis* Speg., n. sp.47. *Stipa sanluisensis* Speg.a. Spiculae $\frac{1}{2}$ b. Flosculus $\frac{1}{2}$ c. Flosculus $\frac{1}{2}$

Diag. Glumae lanceolatae flosculo 3-4-plo longiores, tenuiter 1-3-nerves, e hyalino subviolascens; flosculus pusillus elliptico-subfusoides dorso non v. vix subgibbosulus, glaber, laevissimus nitens; anthopodium diametro dimidio flosculi brevius, villosulum; corona nulla; arista persistens tenuissima, flosculo 15-plo longior. Culmi folia capillaria v. setacea obsolete scabrata non v. parum superantes; panicula angusta subcontracta vaginata.

Hab. In locis sabulosis aridissimis prope *San Luis* et *Córdoba*, aest. 1887-97.

Obs. Perennis, fasciculato-caespitosa, caespitibus majusculis penicilliformibus erectis.

Culmi folia aequantes v. parum superantes graciles (300-400 mm alt.=1 mm crass.) erecti fistulosi ad apicem usque plus minusve foliati laeves, glabri v. vix scaberuli, nodis non v. vix incrassatis atque subfuscescentibus glabris.

Folia omnia isomorpha dense fasciculato-constipata flavido-subvirescentia subrigidula, limbis tereti-complicatis, non v. vix in parte basali obsolete scabridis non striatis glabris (150-250 mm long. =0,4-0,5 mm diam.) intus subcinerascentibus subpulverulentis atque subscabridis (0,75-1,25 mm lat. apert.) apice sensim longeque attenuato-subulatis acutissimis non v. vix pungentibus, vaginis pallidioribus adpressis laevibus glabris ore non contractis auriculis cum ligulis albescenti-subhyalinis lanceolatis longiusculis acutiusculis (2-5 mm long.) glaberrimis productis.

Inflorescentia (100-200 mm long.) primo erecta angusta, vagina folii supremi parum ampliata deorsum involuta, dein exerta secunda subrelaxata, rachi tenui glabra laevi, ramis alternis remotiusculis geminatis v. solitariis gracillimis dense subillimeque scabridis a basi alterne ramulosis, pedicellis (1-6 mm long.) adpressis angulatis dense minuteque scabridis, apicem versus vix clavulatis.

Spiculae subconfertiusculae non v. vix secundae erectae adpressae; glumis carinatus globris (in carina non scabris) flosculo 3-4-plove longioribus, e hyalino pallide violascentibus, lanceolatis sursum longissime acuteque attenuato-aristulatis, infera sub-1-nervi, nervis 2 lateralibus rudimentariis non v. vix evolutis (6 mm long. = 0,75-0,85 mm lat.) superam 3-nervem (5 mm long. = 0,6-0,7 mm lat.) paululo superante; flosculis tereti-ellipticis (non v. vix in prima juventute obsolete a latere compressis) non v. vix inaequilateralibus ac subgibbosulis (cum anthopodio et arista 28-36 mm long. = cum anthopodio sine arista 1,75-2 mm long. = 0,4 mm diam.) non v. obsoletissime dorso subcarinatus, glumella infera primo pallida dein fuscidula coriacea semper glaberrima laevissima atque nitentiuscula, supera perpusilla aegre perspicienda hyalina enervi; anthopodio perpusillo conoideo (0,10-0,15 mm long.) acutiusculo, dense adpresseque villosulo, pilis per dorsum glumellae ad medium et ultra excurrentibus.

Arista non excentrica tenuissima longiuscula persistens (26-34 mm long.) nuda scabrido-papillosa, plus minusve leniter 2-geniculata, geniculo supero parum infra medium, infero ad quantum posticum sitis, parte supera recta aristae reliquam inferam, flosculo addito, superante. Articulatio in foveola umbonis apicalis abscondita.

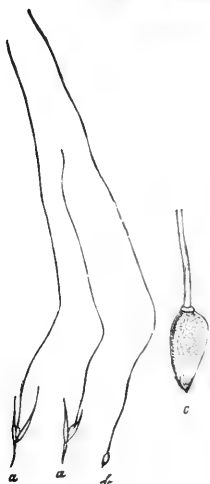
Corona vera nulla sed umbonulus apicalis glumellae obconoideo obtusulo, vix ciliis minutissimis acie adperso.

a/ Ex pratis et collinis prope *Córdoba*, aest. 1897-98 (C. S. et T. Stuckert).

b/ Ex dunis prope *S. Luis*, Apr. 1897 (C. S.).

c/ Ex sabulosis circa *Mendoza*, Febr. 1901 (C. S.).

48. ***Stipa pampagrandensis*** Speg., n. sp.



Diag. Glumae lanceolatae flosculo 2-3-plo longiores, 3-nerves e hyalino violascentes; flosculus subobovatus dorso sat gibbosus, compressulus glaber tenuiter papilloso-rugulosus non nitens; anthopodium diametro flosculi pluries brevius, villosum; corona obsoleta vix umboniformis; arista persistens flosculo 30-40-plo longior. Culmi graciles folia setacea scaberrima non v. vix superantes, panícula angusta laxiuscula vaginata.

Hab. In pratis collinis et montanis prov. *Córdoba* et *Salta*, per ann. 1889 et 1897.

49. *Stipa pampagrandensis* Speg.

a. Spiculae $\frac{1}{4}$

b. Flosculus $\frac{1}{4}$

c. Flosculus $\frac{3}{4}$

Obs. Perennis fasciculato-caespitosa, caespitibus majusculis penicilliformibus erectis.

Culmi folia aequantes v. parum superantes graciles (250-500 mm alt.=0,75-1 mm diam.) erecti fistulosi, ad apicem usque plus minusve foliati, minute striati, glabri non v. vix subscabri, nodis non v. vix incrassatis concoloribus.

Folia omnia isomorpha, dense fasciculato-constipata, flavido-virescentia rigidula, limbis tereti-complicatis scaberrimis non striatis glabris (200-250 mm long.=0,3 mm diam.) intus glabris pallidioribus non scabridis (0,6-0,75 mm lat. apert.) apice sensim

longe acutissimeque subulato-attenuatis non v. vix pungentibus, vaginis pallidioribus adpressis vix striatulis glaberrimis non v. obsolete scabridis, ore non contractis, auriculis cum ligulis albescens, subscariosulis ovatis subbrevis (0,5-1,5 mm long.) integris glabris productis.

Inflorescentia (100-250 mm long.) primo angustissima erecta, vagina folii supremi sat ampliata deorsum vestita, dein exerta secunda relaxatula, rachi tenui glabra scabriuscula, ramis alternis remotiusculis solitariis v. geminatis gracillimis dense subtiliterque scabridis a basi alterne ramulosis, pedicellis (0-5 mm long.) adpressis angulatis scaberrimis, apicem versus leniter incrassatis.

Spiculæ subrelaxatae non v. vix secundae erectae adpressae, glumis carinatus (in carina scabris) glabris, flosculo 2-3-plove longioribus pallide violascentibus, lanceolatis, sursum longissime acute et hyaline attenuato-aristulatis, 3-nervibus, nervis lateralibus semper brevibus, infera (7-8 mm long.=0,75-1 mm lat.) superam (5-6 mm long.=0,6-0,75 mm lat.) longe superante; flosculis obconicis v. obovatis dorso sat gibbosis (cum anthopodio et arista 50-80 mm long.=cum anthopodio sine arista 1,75-2 mm long.=0,75-0,85 mm diam. antero-postico) e latere compressulis (0,4-0,6 mm crass.) dorso carinatus, glumella infera pallida coriacella, ad latera non nervosa, glaberrima, semper opaca atque minute ruguloso-papillulosa, supera lineari (0,3-0,5 mm long.) perpusilla subhyalina nervi apice saepius bidentata; anthopodio perpusillo conoideo (0,10-0,15 mm long.) acutiusculo dense adpresseque albo-pubescente.

Arista excentrica, per aetatem caduca, praelonga (48-78 mm long.) nuda scabrido-papillosa, 1 (an 2?)-geniculata, geniculo manifesto ad tertium inferum sito. Articulatio aristae cum glumella imperspicua,

Corona nulla sed umbonulus pusillus subhemisphaericus, glaber, obtusus.

Species *St. tenuissimae* Trin. peraffinis et facile ejusdem varietatem sistens, flosculis tamen eximie obconicis v. obovatis magis gibbosis acute tuteque distinguenda; cum *St. tenella* Godr. notis perplurimis conveniens, arista tamen conspicue longiore distincta.

Specimina inspecta sunt:

a/ Ex montanis *Pampa grande*, prov. *Salta*, Jan. 1897 (C. S.).

b/ Ex collinis *Sierra chica*, prov. *Córdoba*, Dec. 1889 (T. Stueckert).

49. ***Stipa curamalalensis*** Speg., n. sp.



49. *Stipa curamalalensis* Speg.

a. Spicula $\frac{1}{2}$

b. Floretulus $\frac{1}{2}$

c. Flosculus $\frac{1}{2}$

Diag. Glumae lanceolatae, flosculo 2-3-plo longiores, 3-nerves, violascentes; flosculus lenissime subclavulatus atque dorso subgibbosulus, glaber, scaber, opacus; corona excentrica pusilla umboniformis non v. vix ciliolata; anthopodium diametrum flosculi parum superans, villosum; arista persistens flosculo 8-10-plo longior, ad medium et ad tertium supremum geniculata. Culmi folia capillaria v. setacea scabra non v. parum superantes; panicula depauperata subsecunda, \pm ve vaginata.

Hab. Non rara in rupestribus ad basin montis *Curamalal grande* vocati, Dec. 1899 (C. S.).

Obs. Perennis fasciculato-caespitosa, caespitibus parvis v. mediocribus (150-250 mm alt. = 50-150 mm diam.).

Culmi folia aequantes v. parum superantes graciles (200-250 mm alt. = 0,3-0,5 mm diam.) erecti fistulosi laevissimi glaberrimi non scabri, nodis nunquam incrassatis concoloribus glabris.

Folia omnia isomorpha dense fasciculato-constipata, flavido-subvirescentia, rigidula, limbis complicato-capillaribus v. setaceis teretibus valde scabris non striatis (150-200 mm long.=0,3-0,4 mm diam.) intus concoloribus scabriusculis tenuissime 5-nervulosis (0,5-0,75 lat. apert.) apice sensim longeque attenuato-subulatis acutissimis rigidis atque pungentibus, vaginis pallidioribus adpressis v. subrelaxatis, obsolete striatulis, glabris non scabris, ore non contractis, auriculis non barbatis, cum ligulis ovatis v. lanceolatis obtusis integris v. vix denticulatis subhyalino-scariosis glaberrimis continuis.

Inflorescentia (50-100 mm long.) valde depauperata primo erecta angusta, vagina folii supremi non v. vix ampliata deorsum vestita, dein nonnihil relaxata exerta nuda non v. vix secunda, rachi tenui glabra scabrida, ramis alternis solitariis v. geminatis remotis gracillimis scaberrimis apice 2-3-spiculigeris tantum, pedicellis (2-10 mm long.) angulatis valde scabris apice leniter sensimque incrassatis.

Spiculae laxae remotiusculae semper erectae v. vix subpatulae; glumis carinatis, ad carinam scabridis, violascentibus lanceolatis sursum hyalinis atque longissime tenuiterque attenuato-aristulatis, 3-nervibus, infera (prt. membr. 7 mm long.=1,75 mm lat.=arist. 5 mm long.) superam (prt. membr. 6 mm long.=1,30 mm lat.=arist. 4 mm long.) sat superante; flosculis teretibus lenissime subclavulatis (non v. vix subfusoides) dorso superne paululo inaequaliter inflatis subgibbosisque (cum anthopodio et arista 35-55 mm long.=cum anthopodio et corona 4-4,50 mm long.=sine anthopodio et corona 2,80-3 mm long.=0,6-0,75 mm diam.) e latere ad maturitatem non v. lenissime compressulis (0,55-0,65 mm crass.), dorso non v. obsoletissime subcarinatis, glumella infera primo pallida v. flavescens dein subviolascens coriacea glabra, ad latera non v. in juventute tantum obsolete 1-nervulosa, semper dense minuteque ruguloso-scabrida non nitente, deorsum attenuato-sub-

cuneata, superne inaequilateraliter coarctata atque brevissime subcylindraco-umbonulata; glumella supera lanceolata pusilla (1 mm long.) acutiuscula, hyalina enervi; anthopodio longiusculo (0,65-0,85 mm long.=0,15-0,20 mm diam.) e terete subconoideo, albido, dense adpresseque albo-villoso, villis quartum glumellae inferum vix attingentibus.

Arista leniter excentrica subtenuis mediocris (30-52 mm long.) persistens, rigidula scabrido-papillosa, obsolete 2-geniculata, geniculo supero ad tertium supremum, infero ad medium v. vix infra sitis; articulatio aristae cum glumella eximia tenuissime nervoso-anuliformis.

Corona vera nulla sed umbonulus apicalis glumellae (0,20 mm alt. et diam.) sublateralis, e cylindraco subconoideus apice setulis pusillis saepius coronatus.

Species *St. tenuissimae* Trin. var. *oreophilae* Speg. peraffinis.

APPENDIX

50. *Stipa Ameghinoi* Speg., n. sp.



50. *Stipa Ameghinoi* Speg.
n. sp.

a. Spicula $\frac{1}{1}$

b. Flosculus $\frac{1}{1}$

c. Flosculus $\frac{4}{1}$

d. Anthopodium e fronte $\frac{15}{1}$

Diag. Pappostipa; glumae lanceolatae, flosculo e duplo subtriplo nec non pappo geniculoque aristae longiores, 3-5-nerves, subvirescenti-hyalinae; flosculus fusioideus, longiuscule villosus, parte dorsali dimidia supera glabra laevi excepta; anthopodium diametrum flosculi leniter superans, in parte dimidia infera glabrum, in latere ventrali foveola elongata notatum, ceterum albo-villosum; corona nulla; arista rigidula flosculo sub-4-plo longior vix supra medium geniculata, sub geniculo in parte dimidia infima longe papposo-villosa. Culmi

superantes, panícula contracta paucispiculigera, primo vaginata dein nuda.

Species inter *S. Ibari* Ph. et sequentes (n. 9 clavis dichotomicae) inserenda.

Hab. In campis aridis saxosis *Golfo de S. Jorge*, Patag. centr., Aest. 1900 (C. Ameghino).

Obs. Perennis, fasciculato-caespitosa.

Culmi erecti (100-250 mm long.) foliis saepius valde longiores, glaberrimi laevissimi, nodis non coarctatis glabris atro-annulatis.

Folia fasciculata (25-125 mm long.) conferta obsolete subdisticha, limbis (15-65 mm long.) tereti-convolutis (0,4-0,6 mm diam.) ventre validiuscule sulcato-canaliculatis, virescenti-flavescentibus, glaberrimis, laevissimis, rigidis, apice abrupte valideque subulato-mucronatis pungentibusque, vaginis arete adpressis glabris leniter 7-9-costulato-striatis, ore truncatis, auriculis obtusis glabris, ligulis pusillis (infimis obsoletis v. nullis) saepius inaequilateralibus, integris obtusis.

Inflorescentia spicato-contracta (40-50 mm long.) 3-12-spiculigera, primo vagina folii supremi leniter spathaceo-inflata vestita, dein exerta plus minusve longe pedunculata, rachi glabra v. vix pulverulenta, pedicellis erectis adpressis clavulatis e latere compressulis minute pulverulento-subpubescentibus.

Spiculae aproximatae erectae, adpressae; glumis hyalinis in parte infima dorsali virescentibus, apice longiuscule attenuato-acuminatis sed non aristulatis glabris anguste lanceolatis carinatis, infera 3-nervi, nervis lateralibus brevibus (18-20 mm long.=2-2,25 mm lat.) superam 5-nervem, nervis extimis saepius valde abbreviatis ac subobsoletis (17-19 mm long.=1,80-2 mm lat.) superante; flosculis cylindraceo-fusoides (cum anthopodio et arista 23-26 mm long.=cum anthopodio sine arista 6-6,5 mm long.=sine anthopodio et arista 5-5,25 mm long.=0,75 mm diam.), glumella infera coriacea, in parte dimidia infera longiuscule villosa, in dimidia supera, linea ventrali excepta, glabra laevia, utrimque sensim modiceque attenuata; glumella supera aequilonga coriacea non carinata sed in linea dorsali longiuscule villosula; anthopodio elongato-turbinato in duobus tertiis superis longe albo-villoso, in infimo glabro incurvulo acutissimo et in latere ventrali foveola elliptico-lineari eximie perspicua donato.

Arista persistens rigidula subcrassiuscula (15-20 mm long.) paululo supra medium valide geniculata, parte supra genu recta (7-9

mm long.) dorso convexula ventre applanato-subcaniculata purpurascens non scabra, parte sub genu laxissime torta in dimidio antico nuda complanata, in dimidio postico villis albis (4-5 mm long.) tenuibus pappose-vestita.

51. ***Stipa psittacorum*** Speg., n. sp.

Diag. Microstipa; glumae anguste lanceolatae, flosculo duplo et ultra longiores, 1-3-nerves, hyalinae; flosculus lineari-fusoides, glaberrimus sed in linea dorsali ultra medium longe villosus, laevissimus; corona parum perspicua pallescenti-callosa cum glumella plane continua, acie longiuscule ciliato-villosa; anthopodium diametrum flosculi leniter superans; arista subcaduca. Culmi elati robusti folia e plano convoluta crassa rigida juncoidea laevia longe superantes; panicula ampla laxa erecta v. exarato-patens.

Species inter *St. paramilloensem* Speg. et sequentes (n. 54 clavis dichotomicae) inserenda.

Hab. Abunde in praeruptis collinis *Arroyos de los papagallos* prope *Mendoza*, Febr. 1901 (C. S.).

Obs. Perennis, laxa caespitosa, caespitibus rigidis virescenti-flavescentibus.

Culmi ex quoque caespite numerosi folia longe superantes (250-1200 mm alt.=1-2,5 mm diam.), in quarto infimo \pm ve dense alterne v. subdistiche foliosi, in reliqua parte supera nudi v. remote 1-3-foliati, fistulosi, ab ima basi recti erecti simplicesque glaberrimi laeves e virescenti flavescentes, nodis nudis saepius 1-3, glabris supra subtusque leniter coarctatulis atque pallide subrufescentibus v. fusciscentibus.

Folia omnia isomorpha, infera sat numerosa erectiuscula, superiora pauca patentia, crassa rigida juncoidea, in juventute viridi-glaucescentia per aetatem flavescentia, limbis in vivo apertis planiusculis v. laxe involutis, in sicco arete involutis cylindraceis (50-350 mm long.=1-1,5 mm diam=2-4 mm lat. apert.), sursum sensim angustatis apiceque subulato-pungentibus, extus glabris laevibus v. obsoletissime striatis, intus grosse 5-6-costulatis, pallidis v. glaucis glabris v. pulverulento-puberulis, vaginis omnibus arete adpressis, laevissimis glaberrimis, ore abruptiuscule rotundatis, auriculis fere nullis sed semper longe eximieque villosa-barbatis, ligulis infimis nullis, superis vix evolutis ad lineam transversam minute densissimeque ciliolata reductis.

Inflorescentia semper erecta, rarissime vix subsecunda, primo angusta, dein ramis patentissimis aperta (200-500 mm long.) in prima juventute \pm ve vagina culmigena suprema suffulta, dein longe exerta et nuda; rachi laevi v. obsoletissime striata, nodis barbatulis remotis (internodiis 25-50 mm long.); ramis ad nodos fasciculato-semiverticillatis, inferis 3-5-natis, superis 3-2-natis, elongatis, simplicibus v. remote ramulosis, saepius ultra medium spiculigeris, glabris laevibus; pedicellis brevibus v. \pm ve elongatis (2-25 mm long.) sursum sensim leniterque incrassatis compressulis laevibus glabris.

Spiculae primo erectae rachi adpressae dein relaxatae patentes nutantesque; glumis hyalinis flosculum longe superantibus, lineari-lanceolatis, sursum longe tenuiterque attenuatis saepeque subaristulatis, non carinatis, infera 1-nervi (additis saepe nervis 2 brevibus v. rudimentariis lateralibus) majore (18-22 mm long.=2 mm lat.), superam 3-nervem conspicue brevior (14-15 mm long.=1,75 mm lat.) fulciente; flosculis teretibus \pm ve fusoides (cum anthopodio et arista 75-100 mm long.=cum anthopodio et corona 7,5-8,5 mm long.=sine anthopodio et corona 6-7 mm long.=0,5-0,75 mm diam.), glumella infera primo membranacea flavescenti-pallida mol-

liuscula, dein fuscescente rigidula laevi, linea dorsali excepta, utrimque breviter sensimque angustata; glumella supera pusilla hyalina glabra; anthopodio terete rigido acuto (1-1,35 mm long.) villis densis albis longis per lineam dorsalem glumellae inferae excurrentibus vestito.

Arista subtenuis primo persistens sed ad maturitatem subcaduca (70-94 mm long.), geniculo supero ad tertium posticum, infero ad sextum infimum sitis, in parte recta glabra sublaevis, sub geniculis densiuscule pubescens.

Corona vix manifesta calloso-rigida albida cum glumella continua (1-1,35 mm long.) cylindracea, acie villis tenuibus erectis (0,75 mm long.) densiusculis pectinato-ciliata, in parte ventrali auriculis pusillimis, peraeagre perspicuis, ornata.

INDEX

	Página
Aciachne Benth.....	I
ANATHEROSTIPA Hack.....	III 36
Aristida Linn.....	I
Brachyelytrum Beauv.....	I
DASYSTIPA Speg.....	IV 111
JARAVA (R. & P.).....	IV 98
Jarava ichu R. & Pav.....	101
MICROSTIPA Speg.....	IV 137
Milium Linn.....	I
Muehlenbergia Schreb.....	I
Muehlenbergia variflora Hook. f.....	135
NASSELLA (Trin.).....	IV 147
Nassella caespitosa Griseb.....	117
<i>trichotoma</i> Hack.....	150
Oryzopsis Mix.....	I V 1
<i>avenacea</i> (L.).....	12
<i>bicolor</i> (Vahl) Speg.....	V 6
» var. <i>major</i> Speg.....	8
» var. <i>media</i> Speg.....	9
» var. <i>minor</i> Speg.....	9
<i>Grisebachii</i> Speg., n. sp.....	V 4
<i>Hackeli</i> (ARech.) Speg.....	V 10
<i>lasiantha</i> (Griseb.) Speg.....	V 1
<i>lejocarpa</i> Speg., n. sp.....	VII 33
<i>lejopoda</i> Speg., n. sp.....	VI 19
<i>napostaensis</i> Speg., n. sp.....	VI 15
» var. <i>brachysperma</i> Speg.....	VI 15
» » » »	17
<i>orata</i> (Tr. & R.) Speg.....	VI 21
<i>panicoides</i> (Lam.) Speg.....	VII 31
<i>Ruprechtiana</i> (Desv.) Speg.....	VI 12
<i>stipoides</i> (Tr. & R.) Speg.....	VI 23
<i>tuberculata</i> (Desv.) Speg.....	VII 26
<i>rerrucosa</i> (Ph.) Speg.....	28
» » »	29
» » »	31
<i>uruguayensis</i> (Griseb.) Speg.....	VII 29

	Página	
PAPPOSTIPA Speg.....	III	45
PARASTIPA Speg....	IV	135
Pericleima Prsl.....	I	
PIPTATHERUM (Beauv.).....	II	18
PIPTOCHAETIUM (Prsl).....	II	1
Piptochaetium chaetophorum Griseb.....		21
<i>erianthum</i> Balansa.....		1
<i>lasianthum</i> Griseb.....		1
<i>mucronatum</i> Griseb.....		36
<i>pallidum</i> Ph.? Griseb.....		4
<i>panicoides</i> Dsv.....		31
<i>panicoides</i> Griseb.....		33
<i>Ruprechtianum</i> Dsv.....		12
<i>setosum</i> Arech.....		21
<i>stipoides</i> Hack.....		23
<i>tuberculatum</i> Dsv.....		26
<i>verrucosum</i> Ph.....		23
<i>uruguense</i> Griseb.....		29
PTILOSTIPA Speg.....	III	38
STEPHANOSTIPA Speg.....	IV	58
Stipa Linn.....	I	III 36
<i>Ameghinoi</i> Speg., n. sp.....		163
<i>amphicarpa</i> Ph.....		122
<i>aracensis</i> Speg., n. sp.....	XI	XVI 131
<i>Arechavaletai</i> Speg., n. sp.....	XIII	85
<i>argentina</i> Speg.....		78
<i>bavioensis</i> Speg., n. sp.....	XVI	122
<i>bella</i> Ph.....		43
<i>bicolor</i> Tr. & R.....		12
<i>bicolor</i> Vahl.....		6
<i>brachychaeta</i> Godr.....	XV	111
» var. <i>major</i> Speg.....		113
» var. <i>minor</i> Speg.....		113
<i>caespitosa</i> (Griseb.) Speg.....	XVI	117
» var. <i>clata</i> Speg.....		119
» var. <i>subelata</i> Speg.....		120
» var. <i>subtypica</i> Speg.....		119
» var. <i>typica</i> Speg.....		119
<i>catchaquia</i> Speg., n. sp.....	XV	107
<i>caudata</i> Trin.....	XV	109
<i>ceresiensis</i> OK.....		144
<i>charruana</i> Arech.....	XII	64
<i>chrysophylla</i> Dsv.....	IX	47
» var. <i>major</i> Dsv.....		49
» var. <i>minor</i> Dsv.....		48

<i>Stipa chubutensis</i> Speg., n. sp.	IX	49
<i>Clavazi</i> Ball.	XII	70
» var. <i>bulbosa</i> Speg.		73
» var. <i>typica</i> Speg.		72
<i>cordobensis</i> Speg., n. sp.	XI	141
<i>curamalalensis</i> Speg., n. sp.	XI XVIII	160
<i>Delilei</i> Steud.		98
<i>eminens</i> Cav. f. <i>micrantha</i> OK.		111
<i>filiculmis</i> Del.	XI	144
<i>filifolia</i> Nees	XI	124
<i>formicarum</i> Del.	XII XVII	61
<i>geniculata</i> Ph.		153
<i>gynerioides</i> Ph.	XV	103
<i>Hackeli</i> Arech.		10
<i>humilis</i> Cav.		51
<i>humilis</i> Vahl.	IX	51
» var. <i>chrysophylla</i> OK.		47
<i>hyalina</i> Nees	XI XVII	58
<i>hystericina</i> Speg., n. sp.	XV	115
<i>Iburi</i> Ph.	IX	45
<i>ichu</i> (R. & P.) Knth.	XIV	101
<i>ichu</i> Speg.		103
<i>intermedia</i> OK.		12
<i>intermedia</i> Tr. & R.		6
<i>intricata</i> Godr.		94
<i>jarava</i> Beauv.		101
<i>jarava</i> Ind. Kew.		98
<i>juncoides</i> Speg.		126
<i>laevissima</i> (Ph.) Speg.		4
» » »		6
<i>latifolia</i> Arech.		74
<i>latissimifolia</i> OK.		74
<i>leptostachya</i> Grisb.	XV	105
<i>leptothera</i> Speg., n. sp.	XI XVII	133
<i>ligularis</i> (Grisb.) Speg.	XIV	91
<i>longecylindrica</i> OK.		64
<i>longifolia</i> Ph.		122
<i>Lorentziana</i> Grisb.		111
<i>macrathera</i> Ph.		97
<i>macrathera</i> (Nees) Speg.		97
<i>manicata</i> Dsv.	XIII	74
» var. <i>latifolia</i> (Arech.).		77
» var. <i>media</i> Speg.		77
» var. <i>typica</i> Speg.		76
<i>megapotamica</i> Spreng.	XI	126

	Página
Stipa megapolamica var. <i>juncoides</i> (Speg.)	128
» var. <i>typica</i> Speg.	128
<i>melanosperma</i> Prsl.	X 67
<i>mendocina</i> Ph.	153
<i>mucronata</i> HBK.	38
<i>mucronata</i> Speg.	36
<i>Neeaei</i> Nees.	IX 43
<i>Neesiana</i> OK.	78
<i>Neesiana</i> Trin.	94
» var. <i>ligularis</i> Grisb.	91
<i>nubicola</i> Speg., n. sp.	XII XVI 129
<i>oreophila</i> Speg.	153
<i>ovata</i> OK.	23
<i>ovata</i> Tr. & R.	21
<i>pampagrandensis</i> Speg., n. sp.	XVIII 158
<i>pampeana</i> Speg.	XVII 148
<i>panicoides</i> OK.	26
<i>panicoides</i> Lam.	31
<i>papposa</i> Del.	98
<i>papposa</i> Nees.	X XIV 98
<i>paramilloensis</i> Speg., n. sp.	XVII 139
<i>patagonica</i> Speg.	X 54
<i>plumosa</i> Tr. & R.	VIII 39
<i>pogonathera</i> Dsv.	IX 41
<i>psittacorum</i> Speg.	165
<i>pulchella</i> Mro.	43
<i>quadrifaria</i> OK.	70
<i>rariiflora</i> (Hook. f.) Benth.	XVII 135
<i>Rudolphi</i> Speg. (Ph.).	97
<i>sallensis</i> OK.	VIII 36
<i>sanluisensis</i> Speg., n. sp.	XVIII 156
<i>scirpea</i> Speg., n. sp.	XVII 137
<i>setigera</i> Auct. Amer. nord.	78
<i>setigera</i> Presl.	XIV 94
» for. <i>glabrata</i> Arech.	97
» for. <i>hispidula</i> Speg.	97
» for. <i>pallida</i> Speg.	97
» for. <i>purpurascens</i> Speg.	97
» for. <i>versicolor</i>	97
<i>speciosa</i> Tr. & R.	X 56
» var. <i>major</i> Speg.	58
» var. <i>minor</i> Speg.	58
<i>sublaevis</i> Speg., n. sp.	XIII 82
<i>tandilensis</i> OK.	10
<i>tenella</i> Godr.	6







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